The GENTLEMAN and LADY's
ALLADIUM,

For the Year of our LORD, 1761.

CONTAINING,

ew, Compendious, and Eaſy FRENCH GRAMMAR. A
yal CHRONOLOGER and EPHEMERIS for the Year.
Catalogue of ECLIPSES of the SUN and MOON, from 721
fore, to 1800 Years ſince, CHRIST. With a Computation
the *Year* and *Day* when *Adam* was created. And ſeveral
her *Improvements* in Science.

For the USE of *Schools* and *Academies*.
The *Thirteenth* Number publiſhed.

e AUTHOR of the *Royal* ASTRONOMER and NAVIGATOR,
juſt publiſhed.

5

THUS *uſeful* ARMS in MAGAZINES we place,
All rang'd in Order and diſpos'd with *Grace*;
Not thus alone the *curious* Eye to pleaſe,
But to be found, when *Need* requires, with Eaſe.

ESSAY *on Criticiſm*.

LONDON:
ted for T. CASLON, near *Stationers-Hall*, and J. BIRD, at
Angel and Bible, in *Ave-Mary-Lane*, *Ludgate-ſtreet*.
MDCCLXI.

A NEW
COMPENDIOUS and EASY
FRENCH GRAMMAR,
WHEREIN
The Verbs are ſet out in a clearer Light than in any yet publiſhed.

For the USE of SCHOOLS.

Multum in parvo.

To the MASTERS,
and BRITISH YOUTH,
in all the *Engliſh Schools*
and *Academies*,
This *compendious*
FRENCH GRAMMAR
is inſcribed
by their moſt Obedient, Humble Servant,
The AUTHOR.

BRITISH MUSEUM

PREFACE.

THE Reader will perceive that the PLAN of the following *French Grammar* is taken from the *Learned* PERE BUFFIER's Grammar; which is look'd upon by the judicious as a very great Advantage to the *Learner:* And it were to be wiſhed that all thoſe *Gentlemen*, who have publiſhed *French* Grammars, had copied, in ſome Shape, that *eminent Author*; as it would have ſpared them a great Deal of Labour, and freed them from ſeveral Errors they have committed in the Rules they have given as infallible.

IT is found that this *compendious Method*, here offered to the *Schools*, has improved Youth in a very ſhort Time.

ALL the *Rules* are not without *Exceptions*; but they come as near to *Propriety* as poſſible.

THE *Rules* for the *Pronunciation* are very clear, and are the *ſhorteſt* that have yet been publiſhed·

THE *Articles*, *Pronouns*, and *Verbs* are quite plain, and ſeen at one *View*; which will contribute to the Attainment of them the ſooner.

THE *Syntax* is conciſe; but none of the material *Rules* are omitted.

AND this *uſeful Performance* is ſubmitted to the Approbation of the candid and judicious Teacher of the *French* Tongue.

GRAMMAR comprehends *Nouns*, *Pronouns*, *Verbs* and *Particles*.

PRONUNCIATION.

A.

A is ſounded like *aw* in the Word *Law*. *Ai*, *ay*, Dipthongs, ſound like *ay* in the Word *Day*. If *ai*, *ay*, are followed by another Vowel, the *a* ſounds like the Engliſh *a*, and the *i* ſounds like *ee* in the Word *See*; except ſome few Words, as *aieul*, *payen*, &c. *Ai*, *ay*, followed by *l* or *ll*, the *a* and the *i* are ſounded in the natural French Way. *Au* is ſounded like *o*.

E.

E is ſounded like *ai* in the Word *Raiſin*, *en*, *em*, followed by Conſonants, are ſounded like *awng*, the *g* faintly pronounced; *em*, or *en* followed by Vowels, are ſounded like *en* in the Word *then*. *Emm* followed by a Vowel is ſounded *awmm*. *Eau* is ſounded like *o*, *eu* like *u* ſimply. *E* at the End of Words is not ſounded unleſs marked thus *é* or followed by *z*, *r*, *d*, or *t*.

I.

I is ſounded like *ee* in the Word *See*.

In, *Im*, followed by Conſonants are ſounded like *aing*, the *g* faintly pronounced.

Imm, ſounds like *imm* in Engliſh.

In, followed by a Vowel, is ſounded like *inn* in Engliſh.

In at the End of Words, like *eeing*.

O.

O like the Engliſh *o*.

Ou, like *oo* in the Word *Booby*.

On, *om*, followed by a Conſonant, like *ong*; but if they are followed by a Vowel, or by another *n* or *m*, they are ſounded the ſame Way as in Engliſh.

U.

The Sound of this Letter is only attained by hearing it pronounced by a good Maſter.

Y.

Has the ſame Sound as the *i*.

GENERAL RULE.

Conſonants at the End of Words are not ſounded, unleſs the next Word begins with a Vowel, except ſeveral Words ending in *l* or *r*, and ſome Monoſyllables.

X, *s*, at the End of Words when the next begins with a Vowel, ſound like *ſ* in the Word *theſe*.

But *x* in the Word *Doux*, *Sweet*, is ſounded like *c*, as *Doux Amour*.

NOUNS (the Names and Qualities of Things) are declined by *Articl* make the two Genders, Maſculine, *Le*, *the*; Feminine, *La*, *the*. N Two, Singular, *One*, the Plural, *Many*. Plurals take *s*; but if the end in *al*, *ail*, the Plurals take *aux*. The Singulars in *s*, *x*, *z*, invari *nd*, take *s*, ſtriking off *d*, *t*.

DECLENSION by *Articles*.

	Singular Numb.	Plural Numb.	Indefin. Article.	
N.	*Le*, *la*, *l'*	*Les*, – – – – the	– – – – – – – –	*Roy*,
G.	*Du*, *de la*, *de l'*	*Des*, of or from the	*De*, *d'* of *or* from	*Reine*,
D.	*Au*, *à la*, *à l'*	*Aux*, – – – to the	*à* – – – – – – to	*Homm*

Compar. Degree, *Plus*, more. Superlat. Degree, *Le*, *La*, *plus*, m

PRONOUNS (inſtead of Nouns) are declin'd by the *Indef.*

Singular.	Plural.
Moi, *me*, me, to me	*Nous*, *nous*, we, us, to us
toi, *te*, thee, to thee	*Vous*, *vous*, you, to, &c.
lui, *le*, *la*, him, her, &c.	*Les*, *leur*, them to, &c.

Sing. Plur.	maſ. fem. plur.	n. ac.
Notre, *nos*, our	*Mon*, – – my	*Qui*, *que*, who, that, who
		m. fem.
Votre, *vos*, yours	*Ton*, *a* *es*, thy	*Quel*, *le*, who
Leur, *leurs*, their	*Son*, his, her	*Lequel*, *laquelle*.

VERB is an *Action* with Relation to Times, Numbers, and P

ROOTS of VERBS from whence *Tenſes* derive.

Infin.	*Blamer*, to blame	*Finir*, to finiſh	*Reçevoir*, to receive	*Rendr*
P. Act.	*Blamant*, blaming	*iſſant*, - - ing	*vant*, – – ing	*ant*
P. Paſſ.	*Blamé*, blamed	*Fini*, - - ed	*Reçû*, – – – ed	*Rend*

TABLE of the Plurals of VERBS.

Nom. wt. recip. Verbs.				
je, *me*	Preſ.	*Blame*,	*ons*, *ez*, *ent*	Blame, do blame, a
tu, *te*	Imp.	*Blamois*	*ions*, *iez*, *oient*	Blamed, did blame,
il, *ſe*	Cond.	*Blamerois*		might, ſhd, wd, or c
elle, *ſe*	Perf.	*Blamai*,	*mes*, *tes*, *rent*	Blamed, *time quite*
nous, *nous*	Fut.	*Blamerai*,	*ons*, *ez*, *ont*,	ſhall, or will blam
vous, *vous*	Preſ. Subj.	*Blame*,	*ions*, *iez*, *ent*	may, or can blam
ils, *ſe*	Perf.	*Blamaſſe*,		might blame.

To find out the PERSONS SINGULAR.

If the firſt Perſon has neither *s* or *x* at the End, the Second take Third as the Firſt; but if the Firſt ends in *s* or *x*, the Second is as t the Third takes *t*, except *je vais*, *tu vas*, *il va*; and *ai*, *as*, *a*, Preſ. o the Firſt ends in *ai*, the Second changes *i* into *s*, and *s* is ſuppreſſed i In the Perf. Subj. the final *ſſe* is chang'd into *t*, *fiſſe*, *fit*.

Verbs in *enir* and *evoir*, whoſe Third Perſon Plural, Preſ. Indicati and *oivent*.

FORMATION *of* TENSES *from the* Table *and* Roots.

The Imp. Ind. is formed from the Part. Active, by changing *ant* i Future by adding *ai* to the final *r* of the Infin. the Condit. from t changing *rai* into *rois*. The Preſ. Subj. from the Part. Act. by *ant* Verbs in *enir* and *evoir*, that take *ienne* and *oive*, the Perf. Subj. fro Perf. Sing. Perf. Ind. by adding *ſe*. All Compound Tenſes from t or *etre*, with the Part. Paſ. as *j'ay Blamè*, *je ſuis Blamé*, &c.

In the following **LIST** of *Irregular* Verbs, the Roots and Tenſes Irregular are ſet down. The Preſ. will be marked with 1, the Pe ture 3, Preſ. Subj. 4. Generally the Perf. Ind. are like the Part. ing *s* to the Participle Paſſive, when they have no *s*.

Aller, to go.
Allant. *Irai*, 3.
Allé. *Aille*, 4.
Je vais, *vont*, 1.
Avoir, to have.
Avois, Imp.
Ayant.
eu
J'ai, *ont*, 1.
Aurai, 3.
J'aye, 4.
Acquerir, to acquire.
Acquerant.
Acquis.
Acquiers, 1.
Acquerrai, 3.
Boire, to drink.
Beuvant.
Bû.
Bois, *Boivent*, 1.
Boive, 4.
Bouillir, to boil.
ant.
i.
Je Bous, 1.
Bouille, 4.
Croire, to believe.
Croyant.
Cru.
Croye, 4.
Courir, to run.
Courant.
Couru.
Cours, 1.
Currai, 4.
Dormir, to ſleep.
Dors, 1.
Cueillir, to gather.
ant.
i.
Cueillerai, 3.
Conclure.
uant.
u.
Dire, to ſay.
Diſant.
Dit.
Dis, *dites*, 1.
Comp. *Diſez.*
Ecrire, to write.

Ecrivant.
Ecrit.
Ecrivis, 2.
Etre, to be.
Etant.
Eté.
Suis, *es*, *eſt*, 1.
Sommes, *etes*, *ſont.*
Fus, 2.
Serai, 3.
Sois, 4.
Faire, to do.
Faiſant.
Fait.
Fais, *vous faites.*
Font, 1.
Fis, 2.
Ferai, 3.
Faſſe, 4.
Coudre, to ſew.
Couſant.
Couſu.
Lire, to read.
Liſant.
Lu.
Mettre, to put.
Mettant.
Mis.
Moudre, to grind.
Moulant.
Moulu.
Meule, 4.
Mourir, to die.
Mourant.
Mort.
Meurs, *ourons*, 1.
ez, *meurent.*
Mourus, 2.
Murrai, 3.
Meure, 4.
Naitre, to be born.
Naiſſant.
Né.
Naquis, 2.
Verbs in
Oitre, *aitre.*
iſſant.
u.
Pouvoir, to be able.
Pouvant.

Pu.
Peux, *euvent*, 1.
Pourrai, 3.
Puiſſe, 4.
Prendre, to take.
Prenant.
Pris.
Prenne, 4.
Savoir, to know.
Sachant.
Sû.
Sais, *avons*, 1.
Soudre, from thence
reſoudre.
Reſolvant.
Reſolu.
Reſous, *olvons*, 1.
Reſolve, 4.
Suivre, to follow.
Suivant.
Suivi.
Suis, *s*, *t*, &c. 1.
Vaincre, to ſubdue.
Vaincant.
Vaincu.
Vainquis, 2.
Valoir, to be worth.
Valant.
Valu.
Vaux, 1.
Vaudrai, 3.
Vaille, 4.
Venir, and others in
enir.
Venant.
Venu.
Viens, 1.
Vins, 2.
Viendrai, 3.
Vienne, 4.
Vivre, to live.
Vivant.
Vecu.
Vis, 1.
Voir, to ſee.
Voyant.
Vu.
Vis, 2.
Verrai, 3.
Compounds, *oirai.*

Vouloir, to be willing.
Voulant.
Voulu.
Veux, *Veulent*, 1.
Voudrai, 3.
Veuille, 4.
Imperſonal Verbs.
C'eſt, it is.
C'etoit, it was.
Ce fut, it was, &c.
Il y a, there is.
Il y avoit
Il y eut } there was, *&c.*
Il faut, it muſt.

Il faloit.
Il falut.
Il faudra.
Je, *tu*, *il*, *nous*, &c. are all placed after Verbs to form Interrogations.
Negatives, *ne*, *pas*, *point*, not, &c. *ne* goes before the Verb, and *pas*, *point*, after.
Adjectives take *e* to form their Feminines. Except

M.	F.
Aitre,	*Aitreſſe.*
rais,	*raiche.*
eau,	*elle.*
ec,	*eche.*
eil,	*eille.*
euf	*euve.*
eux,	*euſe.*
ic,	*ique.*
ien,	*ienne.*
if,	*ive.*
nin,	*nigne.*
ong,	*ongue.*
ori,	*orite.*
ou,	*olle.*
oux,	*ouce.*

SYNTAX.

Is the due Diſpoſition of the Parts of Speech to form regu Sentences.

Articles, *Le*, *La*, *L'*, *Les*, and their Caſes are placed bef Names of Kingdoms, Provinces, Rivers, Virtues, and Vic *La France*, *La Clemence*, &c. except when theſe Names of Kin doms are mentioned; as *going to*, *ſtaying in*, *or coming from*, th we uſe *de* or *en* without the Article, or *dans* with the Article.

Du, *de la*, *de l'*, *des*, expreſs Parts of Things; *du Pain*, so Bread, &c.

If the Adjective is before the Subſtantive we uſe *de*, inſtead the Def. Article, *de modeſtes ignorans.*

After Words of Quantity comes *de*, *trop d'argent*, &c. b ſignifying *much*, *many* takes the Def. Article, *bien du merite.*

Adjectives agree with their Subſtantives in Gender and Numbe *La Grande Ville.*

Participles are like Adjectives with this Difference, they a always placed after Subſtantives; they are indeclinable after t Verb *avoir*, unleſs the Noun precedes the Verb, *elle a donné l pomme que j'ay vendue*; declinable after the Verb *etre*, exce *Etre* is uſed inſtead of *Avoir* in the Reciprocal Verbs, in whic Caſe Participles follow the Rule of the Verb *Avoir.*

Compariſons, *plus*, *moins*, are followed by *que*, unleſs ſignifyi Numbers, then by *de*, *plus de deux jours*; if they are follow by a Verb, *ne* is put, *Je lis mieux que je ne parle.*

Pronouns, *me*, *te*, *ſe*, *nous*, *vous*, *le*, *la*, *les*, *lui*, *leur*, *y*, e are placed before Verbs, except in the ſecond and firſt Perſons the Imperative Mood when there is no Negation, *Je vous donn donnez-nous.*

Verbs have always a Nominative, which they agree with, *No Blamons.*

Verbs of *Intreaty* or *Command* take *de* after them.

Several Verbs with *que* after them put the following in the Sub juncti

ctive Mood, *Il faut que je liſe.*
Particles which anſwer to the *Adverbs, Conjunctions,* &c. of the tins, are unalterable.

CHRONOLOGICAL NOTES for 1761.

minical Letter, N. S.		D
O. S.		G
k of the Sun		7
diction		9
act		23
tuageſima Sunday,	Jan.	18
ageſima		25
inqua. or Shrove Sund.	Feb.	1
Wedneſday		4
adrageſima, or 1ſt Sunday in Lent		8
Sunday	March	15
ITER		22

Low Sunday	Mar. 29
Rogation	Apr. 26
Aſcenſion Day	30
Whitſunday	May 10
Trinity Sunday	17
Advent	Nov. 29

EMBER DAYS.

Feb. 11, 13, 14.
May 13, 15, 16.
Sep. 16, 18, 19.
Dec. 16, 18, 19.

ROYAL CHRONOLOGER *for the* YEAR 1761; *ing a* MEMORANDUM *of the* Birth-days *of the* OYAL FAMILY *of* Great Britain, the Holidays, emarkable Days and Events, &c.

THE STAMP-OFFICE *is acknowledged to have a Right, by* of Parliament, *to charge a* Duty *on any printed Performance* h is literally *and* truly *a* CALENDAR *or* ALMANAC, *ſerving* y *one Year or Part of a Year, to come, or on any* printed Work, *for that Time,* **chiefly** *ſerving the Purpoſe of a* Calendar *or* nac; *but that Office having no Right to charge a Du-* *any* PRINTED WORK *as* a Calendar *or* Almanac, LY *ſerving that Purpoſe (becauſe every* chronological *or* printed Book *of* Chronology, *or every printed Fi-* *Letter contained therein, may* PARTLY *ſerve that Purpoſe.)* *refore think ourſelves obliged here to explain (as a Fence againſt* *plaints and Miſrepreſentations of the* malevolent, ignorant, vious) *that our* PALLADIUM *is* **no Calendar** *or* **Al-** **nac,** *nor will the following Chronologer of* Memorandums, *our* Ephemeris, contained therein, (*heretofore uninterrup-* *e under* that Denomination; all **chiefly** ſerving for nd better Purpoſe *than a* Calendar *or* Almanac. *And therefore*

fore our Work *is not properly ſubject to Complaint, nor ſubj*
Stamp-*Duty*; *except as a common Pamphlet.*

†‡† The **Feſtival* marked with * is preceded by a *Vigil* or
If any of the *Feaſt-days* marked *, fall upon a *Monday,*
Vigil or ***Faſt*** muſt be kept on the *Saturday* before, and not on
Sunday; which is the greateſt of *Feſtivals.*

† The Days having this Mark † againſt them, are Holi
obſerved at the *Exchequer, Stamp-Office, Exciſe-Office, Cu*
Houſe, Bank, Eaſt-India, and *South-Sea Houſes.*

N. B. At the CUSTOM-HOUSE there is no Holiday on *V*
tine, St. *David, Shrove-Tueſday, Eaſter-Wedneſday, Duke* of
berland's Birthday, *Whitwedneſday,* St. *Swithin, Lammas-*
Fire of London, or *Holy-Rood.*

At the SOUTH-SEA-HOUSE and EAST-INDIA-HOUSE,
is no Holiday on *Valentine,* St. *David,* St. *Swithin,* and
Rood.

JANUARY xxxi Days.

1 *Circumciſion.* †
4 Sir *Iſaac Newton* born 1643, N. S.
1 *Sund. after Chriſtmas.*
5 Old Chriſtmas Day.
6 Epiphany. †
11 1 *Sunday after Epiphany.*
13 Hillary
14 Ox. & Camb. Ter. beg.
15 Exchequer opens.
17 Old Twelfth Day.
18 *Septuageſima.* Priſca.
20 Oct. Hill. 1 ret. Fab.
21 Agnes.
22 Vincent.
23 Hillary Term beg.
25 *Sexag.* Conv. of St. *Paul.* †
27 Quind. Hill. 2 ret.
30 K. Cha. I. martyr'd 1648-9, O. S. 12 min. paſt One. †

FEBRUARY xxviii. Days.

1 *Shrove Sunday.*
2 Purif. of B. V. M. or Candlemas-day. Shrove Monday. †
3 Shrove Tueſday, or *Carnival.* † 3 ret.
4 B. Blaize. Aſh-Wedneſ. or 1ſt Day in Lent. †
5 Agatha. Camb. Com. Batch. Arts.
8 *Quadrageſima,* 1 *Sun*
Lent.
9 Oct. Purif. 4 ret.
10 Dies Scholaſt. at Ox
11 Ember, 13. 14.
12 Hillary Term ends.
13 Old Candlemas Day.
14 Valentine. †
15 2 *Sunday in Lent.*
22 3 *Sunday in Lent.*
24 St. *Matthias.* †
28 Hare-hunting goes out.

MARCH xxxi Days.

1 4 *Sunday in Lent.*
St. David, † Anniver
Meeting of Welch
ciety, who wear a
on this Day, in Me
of a famous Vi
gained over the *Sa*
2 Cedde or Chad.
5 Pr. Mary of Heſſe b.
Camb. latter Act.
7 Perpet. Maurit.
8 5 *Sunday in Lent.*
12 Gregory.
14 Ox. and Cam. Term
15 *Palm Sunday.*
17 St. Patrick.

18 Ed. K. Weſt Sax.
19 Pr. Louiſa Ann b. 1749. Maundy-Thurſday.
20 Cuthbert. Joſeph. Eq. Day and Night. Good Friday. †
21 Benedict.
22 EASTER-SUNDAY.
23 *Eaſter Monday*. †
24 *Eaſter Tueſday*. †
25 *Eaſter Wedneſday*. Annun. *Lady-Day*. 1 QUAR. DAY. D. of York b. 1739.
29 *Low Sunday*.
31 Bank Notes of 10 and 15 Pounds each firſt iſſued.

APRIL xxx Days.

1 All Fools Day. Ox. and Cam. Term beg.
3 Richard.
4 Ambroſe.
5 Old Lady Day. 2 *Sunday after Eaſter*.
8 Eaſter Term beg.
12 3 *Sun. after Eaſter*. 2 ret.
15 Sun and Clocks together.
19 4 *Sund. after Eaſter*. 3 ret.
20 Weſtminſt. Election.
23 St. George. †
25 St. *Mark*. †
26 *Rogation*. 5 *Sunday after Eaſter*. 4 ret. D. of Cumberland b. 1724.
27 Victory of Culloden.
27, 28, 29, Rogat. Days.
30 Aſcenſion Day. †

MAY xxxi Days.

1 *Phil. and James*. †
3 6 *S. after Eaſter*. Invent. of the Croſs.
4 Eaſter Term ends.
6 St. John ante Port. Lat.
7 Oxf. and Camb. Ter. end.
10 *Whitſunday*. †
12 Old May Day. *Whit. Tueſday*. †
13 Ember. 15. 16. *Whit. Wedneſday*. †
17 *Trinity Sunday*.
18 Trin. College Election.
19 Dunſtan.
21 *Corpus Chriſti*.
22 Trinity Term begins.
24 1 *S. after Trin*. Pr. Fred. William born, 1750.
25 2 ret.
26 Auguſtine.
No Night, all Twil.
27 Venerable Bede.
29 K. Ch. II. Nat. & Reſt. after 12 Years Exile. †
31 2 *Sunday after Trinity*.

JUNE xxx Days.

1 Nicomedes. 3 ret.
4 Geo. Pr. of Wales born. 1738. †
5 Boniface.
7 3 *S. aft. Trinity*.
8 4 Ret.
10 Prſs Amelia born 1711 †
Prſs Carolina born 1713.
Trinity Term ends.
11 *Barnabas*. †
14 4 *S. aft. Trinity*.
16 Sun and Clocks together.
17 St. Alban.
20 Tranſ. Ed. K. W. Sax.
21 5 *Sund. after Trinity*.
22 K. George Inaugur. beginning 35 Year of his Reign. †
Longeſt Day.
24 St. *John Baptiſt*. *†
SECOND QUARTER Day.
25 St. John's Coll. Elect.
26 K. Geo. II. proclaimed. †
28 6 *Sunday aft. Trinity*.
29 St. *Peter*. * †
30 Buck-Hunting comes in and continues till Holy Rood. Exeter and Wadham College Election at Oxford.

JULY xxxi Days.

2 Viſitation of V. Mary. Cam. Commencement.
3 *Dies Comitior.*
4 Tranſ. St. Mart.
5 7 *Sund. after Trin.* Old Midſummer-Day.
7 Thomas à Becket.
9 Oxford Act. 7 Days from Cam. Commenc. incluſ.
12 8 *Sunday aft. Trin.*
15 Swithin. †
19 10 *Sund. aft. Trin.*
20 Margaret.
22 Mary Magdal. Magdal. Coll. Elect. Ox. Prſ. Carol. Matilda, b. 1751.
24 Magdal. Coll. Elect. at Oxf. *Ticonderoga* in Amer. taken by General *Amherſt*.
25 St. *James*. * † Fort Niagara in Amer. ſurrendered to Sir Wm. Johnſon, 1759.
26 11 *S. aft. Trin.* St. Anne.
30 Dog Days begin. Sirius riſes with the Sun.

AUGUST xxxi Days.

1 *Lammas-Day.* †
2 12 *Sund. aft. Trin.*
4 Crown Point in Amer. taken by Maj. Gen. Amherſt, 1759.
6 Transfiguration.
7 Name of Jeſus.
9 13 *Sunday after Trin.*
10 St. Laurence.
11 Prſ. Auguſta b. 1737.
12 Old Lammas Day.
15 Aſſumption V. M.
16 14 *Sunday aft. Trinity.*
21 Athanaſius.
23 15 *Sunday aft. Trin.*
24 *St. Bartholomew.* * †
28 Ss. Auſtin.
29 Beheading St. John Bap.
30 15 *Sunday aft. Trin.* Sun and Clocks together.

SEPTEMBER xxx Days.

1 Giles.
2 Lon. burnt 1666, O. S. †
6 16 *Sunday aft. Trin.*
7 Eunurchus.
8 Nativ. B. V. M. Char. III. procl. K. of Spain.
9 Dog Days end.
13 17 *Sunday aft. Trin.*
14 Holy Croſs. †
16 Ember, 18, 19.
17 Lambert.
18 City Quebec taken by Gen. Wolfe, 1759.
20 18 *Sund. aft. Trin.*
21 St. Matthew. †
22 Equal Day and Night in all the World.
26 Cyprian.
27 19 *Sunday after Trin.*
28 Sheriff of Lond. ſworn.
29 St. *Michael.* THIRD QUARTER DAY. Hare-Hunting comes in and laſts till the End of Feb.
St. Jerome.

OCTOBER xxxi Days.

1 Remigius B. Rhemes.
4 20 *Sund. aft. Trin.*
6 St. Faith.
9 St. Dennis.
10 Old Michaelmas-Day. Ox. & Cam. Ter. beg.
11 21 *Sund. after Trin.*
13 Tranſ. K. Ed. Conf.
17 Etheldred Virg.
18 22 *Sund. aft. Trin.* St. Luke. †
19 St. Frideſwide, a Feſtival at Oxf.
22 K. George II. crowned, 1727. †
25 23 *Sunday aft. Trinity.* St. Criſpin.
28 St. *Simon* and *Jude*. * †

NOVEMBER xxx Days.

1 24 *Sunday aft. Trin.* *All Saints.* †
2 All Souls. Prin. Or. b.
3 All Souls Coll. Election. 1 ret.
4 King Will. born. †
5 Powder Plot 1605 O. S. †
6 Leonard. Mich. Ter beg.
7 Pr. Hen. Fred. b. 1745.
8 25 *Sunday aft. Trin*
9 K. Geo. II. born 1683, N. S. Ld. Mayor's Day London. †
10 K. Geo. II. Birthday kept. †
11 St. Martin. †
12 2 ret.
13 Britius.
15 26 *Sund. aft. Trin.* Machutus.
17 Hugh. Anniverſary of Q. Eliz. Procl. 1558.
18 3 ret.
20 Leonard.
22 27 *Sun. aft. Trin.* Cecilia. Old Martinmas-Day.
23 St. Clement,
25 St. Catherine. 4 ret. Pr. Wil. Hen Fred. b. 1743.
26 Baliol Coll. Elect.
28 Mich. Term ends. Q. Eliz Acceſſion. †
29 *Advent Sund.*
30 St. *Andrew.* * Prſ. Dow. of Wales born 1719 † Anniverſary Meeting of the Royal Soc. Mich. Term ends.

DECEMBER xxxi Days.

4 Barbary.
6 2 *Sund. in Advent.* Nich.
8 Concep B. V. M.
13 3 *Sun. in Adv.* Lucy.
16 O Sapientia. Ember 18 and 19.
17 Ox. and Cam. Ter. end.
18 Prſ. Louiſa Q. Denm. b. 1724.
20 4 *Sund. in Advent.*
21 Shorteſt Day. St. Tho. †
23 Sun and Clocks tog.
25 *Chriſtmas-Day.* * †
4 QUARTER DAY. Fox Hunting comes in and laſts till Lady-Day.
26 St. *Stephen.* †
27 1 *Sund. aft Chriſtm.* St. John Evangel. †
28 Holy Innocents. †
31 Sylveſter B. of Rome.

NEW ÆNIGMAS.

I. ÆNIGMA 105. By Mr. *Thomas Harris*, of *Bugbrook*, near Northampton.

'Tis I that fire the Lover's Heart with Pain,
And by my Aid no Lover ſighs in vain:
Bright *Cloe*'s Dreſs each Heart with Rapture warms,
Her Mien adds Beauty to her circling Charms;
So I add Ardour to the Lover's Pain,
Who to reſiſt me ſtruggles, but in vain.
'Tis I that teach the Lovers how to love,
And the cold *Fair* with ſweet Compliance move:
" Of all your wakeful Thoughts I am the Theme,
" You court me too in ev'ry nightly Dream."
When Northern Blaſts the murm'ring Riv'lets freeze,
And ſimp'ring *Dolly* toaſts her ſkimm'd-Milk Cheeſe,

With Ladies I to Balls and Plays retire,
Where I their tender Hearts with Love inſpire:
Not one ſweet Paſſion e'er can be expreſs'd,
But I unbounded reign within their Breaſt.
In conſtant Love I am the brighteſt Scene,
(Indeed without me Love had never been)
From hence, ingenious Ladies, ſolve my Name,
Whoſe Pow'r does much contribute to your Fame.

II. ÆNIGMA 106. By Mr. *Chriſtopher Maſon.*

SOME Men aver in *Eden* I was born,
And rev'rend Sages treat my Name with Scorn;
The *Son* his *Sire*, the RIB her paſſive *Spouſe*,
Prompted by me, nor Fear nor Rule allows;
The pamper'd Child, the ſelf-conceited Fool,
And lawleſs Tribe, are *Pupils* at my School.
As for my Pow'r, this I can boldly ſay,
Nor Peer, nor Prince, nor Gods, but own my Sway.
But one Word more—The Myſt'ry to expound;
The fatal Cauſe I am, God curs'd the Ground.

III. ÆNIGMA 107. By Mr. *John Vine*, of *Heathfield.*

MY Riſe from Earth, my Mode's from Art of Man;
I've many *Siſters* of the ſelf-ſame Clan,
Who ſtruggle hard for wretched Man's Support,
Yet quite Reverſe you'll find my chief Effort;
For I provoke, and cauſe inteſtine War,
And by my Aid make diff'rent Pow'rs to jar.
One Pow'r to me adds Force for proper Uſe,
But when that fails, I *human Helps* produce.
Two active Slaves toil, ſtruggle, ſtrive, and groan,
Like *Syſiphus*, when rolling up his Stone;
T'aſcend the *Grades*, they ſweat and heave amain,
But near the *Summit* down they ſink again.
Again they ſtrive, again, o'ercome by Force,
Till I'm retriev'd, and ſteer my *wonted Courſe:*
My Slaves diſmiſs'd, I ſtill keep on my Round,
And ſtill provoke—More Matter to confound.
  Two maſſy *Limbs* that move with tardy Pace,
Alternate move, and meaſure Time and Space;
There work two Slaves, till they both heave for Breath,
Whoſe Aid prepares the Inſtruments of Death;
To ſerve *Bellona* chiefly is their End,
In warlike Stores; *Great-Britain* to defend,
That PRINCE and *Subject* may their Rights enjoy,
And curb proud *Gauls* who would this Land annoy.

IV. ÆNIGMA 108. By Mr. *W. Swift*, of *Stow*, near *Lincoln.*

A Head I have, but neither Noſe or Eyes,
Nor Hands nor Arms, yet never cauſe Surpriſe:
My *Belly*'s large to hold ſufficient Food,
But moſtly that of *human Fleſh and Blood*:
Four Feet I have with which I keep my Place,
I never run nor walk, yet move apace.

V. ÆNIGMA 109. By the ſame GENTLEMAN.

1.

IN *Germany* I'm always found,
And there appear in *Green*;
Whene'er you hear the Trumpet's Sound,
With *Gen'rals* I am ſeen.

2.

I in the Front of *Guards* appear,
And there I bear the *Bell*;
In Fighting I am in the Rear,
If I the Truth may tell.

3.

Sometimes I cloſely do engage,
But ne'er among the Slain;
Altho' no Coward, yet in *Rage*
I always fly the *Plain*.

4.

God bleſs *Great George*, our Sov'reign King,
With whom I'm always found;
In *England* ſtill my Fame ſhall ring,
While Sun and Moon go round.

VI. ÆNIGMA 110. By Mr. *Chriſtopher Maſon*.

BY Land or Water I can ſteer,
Oeconomiſt or Engineer,
Soldier or Sailor, as it ſuits,
Engage with Men as well as Brutes;
So artful in my Politics
That ſome will ſay I ſprung from *Styx*;
For I can act by Land or Water,
And am of an amphibious Nature.
To no Religion ſtiffly bent,
I may, or I may not, keep Lent;
I feed on either Fleſh or Fiſh,
For Sake of Change I change my Diſh.
In the *new World* I've one *Half-Brother*,
And we're ſuppos'd to have one Mother:
Our Time of Birth I'll not declare,
Tho' of one Age 'tis thought we are.
Authors agree he's not more old,
Tho' greater Artiſt ſome will hold.
In gen'ral Terms we Peace prefer,
Yet have we each a *Sloop of War*.
More to reveal I here will ceaſe;—
Declare our Names, or hold your Peace.

VII. ÆNIGMA 111. By Mr. *Iſaac Tarrat*.

START not, ye Swains, if I exhibit
As dire a Fiend as e'er gain'd Gibbet;
If from the *Devil's Peak* I come,
Or Womb of *Herculaneum*:

Read me, and take me at firſt Gueſs,
And I'll enroll you F. R. S.
Arm'd, like a Shark, with Teeth complete,
With which I bite,—but never eat:
My Food's ſupply'd me diff'rent-wiſe,
I take it *in* at both my Eyes,
And gormandize with ardent Turn,
But indigeſted 'twill return.
Emblem of *Dunce* I'm often deem'd,
Yet by moſt *Tyros* I'm eſteem'd;
I'm often call'd a giddy *Aſs*,
Tho' *Gravity*'s my proper Claſs.
But true, in *Fact*, without a Trope,
I'm more than *Maddox* on a Rope;
And once depriv'd of *Pſyche*'s Zone,
Dull and inactive I am known;
Yet muſt immortal e'er remain,
Thanks to dear *Pope*'s immortal Strain,

VIII. ÆNIGMA 112. By Mr. *Thomas Sadler* of *Norbury*.
I MOVE on my Head, tho' ſupported by Man,
My Belly is large — Tell my Name if you can.

⁂ WHOEVER *ſends the beſt Anſwers to the following* ÆNIGMA *before* Candlemas *next will be intitled by Lot to* 4, 3, *and* 2 Palladiums, *to be delivered in* London, *according to Direction.*

PRIZE ÆNIGMA. By Mr. *Iſaac Tarrat* of *Epſom*.

Inſigne, recens, indictum ore alio. HOR.

EMBLEM of Innocence I bear,
When from my Maker I appear;
But what avails pure Innocence,
When Pow'r prevails o'er Impotence?
I'm to a lofty Dome conſign'd,
In cloſe Impriſonment confin'd,
Then, *Culprit*-like for horrid Deed,
I'm rack'd and preſs'd until I plead,
And promiſe too (and moſt devoutly)
To ſerve my King and Country ſtoutly,
Which I've perform'd ten thouſand Ways,
From WILLIAM's down to GEORGE's Days.
True *Engliſh* Breed; but, by Relation,
Arabia help'd my Education.
I'm trimm'd in Black for future Deeds,
As Widows charm moſt in their Weeds,
As bright a *Belle* as you can wiſh her,
With Charms ſuperior to *Kit. Fiſher*.
The Female Enſign that I bear
Has luckleſs prov'd to many an Heir,
Who, lur'd by me, and by his Fellows,
Baſe Rapes commits — Their End the Gallows.

In me exiſts ſuch Contradiction,
Should half be told, you'd think it Fiction.
'Tis I can give the ſtupid Taſte,
Or make the Poets lie at leaſt;
Beſtow the glitt'ring *Gems* that deck
The fair *Lavinia*'s lovely Neck.
I make my *Vot'ries* dine on Plate,
I give the gilded Coach of State.
At Ball, Aſſembly, or *Ridotto*,
Yet *ſemper eadem* is my Motto.
The Beau for Pleaſure riſks the Main,
The Merchant for the Hopes of Gain;
But I, a ſage Negotiator,
Can warp a Judge—pleaſe *Petit Maître*;
So 'cute, ſo handy, for my Work,
Can bribe a *Dutchman*, ſooth a *Turk*:
At proud *Verſailles* they've ſeen my Merit,
And at the *Hague* I ſhew my Spirit.
At Home, when Friends and Int'reſt fail,
I can, when Nothing elſe, prevail.
Moſt Parts of *Europe* I've been o'er,
And coaſted oft near *Afric*'s Shore;
But worn with Age, of Travel tir'd,
And cloth'd in Rags, I'm ſtill admir'd;
Admir'd abroad, bring Honour Home,
And make my *exit* in my natal *Dome*.

The QUERIST.

NEW QUERIES.

I. QUERE 116. *By Mr.* W. SMITH, *of* Stow.

WHAT was the Value, in *Engliſh Currency*, of the Silver
Matthew xxvi. 15.) with which *Judas* betray'd our Lord and
viour Chriſt?

II QUERE 117. *By the ſame.*

WHY does every Thing appear crooked ſeen through a ſphe-
al Glaſs?

III. QUERE 118. *By* J. W. G.

NO Story is more frequently met with than the *Singing of the*
wan, particularly at its Death; ſome treating it as true, others
a Fable. Among the firſt Authors who credit it, we find
acreon, *Plato*, *Horace*. *Ovid*, *Olaus Magnus*, &c. whoſe Com-
entators generally countenance it. On the contrary, we find
ancient a Writer as *Ælian* denying it, who ſays neither he
any one elſe, he believes, ever heard one. The Air it has
an ancient *Plinian* Fable, on the one Hand, and the Poſſi-
ity of refuting it, if falſe, on the other, make it dubious
ich Opinion to embrace. Quære, the *Truth* or *Falſity* of this
y, which is of no leſs than two or three Thouſand Years
ding?

IV. QUERE 119. *By Mr.* Iſ. Tarrat *of* Epſom.

WHENCE does it happen that the *Plant*, which well
We name the *ſenſitive*, ſhould move and feel?
Whence knew the Leaves to anſwer her Command,
And with quick *Horror* fly the neighb'ring Hand?

PRIOR.

V. QUERE 120. *By the ſame Gentleman.*

WE may obſerve that in dry, hot Weather, towards Sun-ſetting, *infinite* Lines of *Goſſimer*, or Spider-Webs, lie on the Graſs, in *parallel* Meridians; *Quere* the Reaſon why theſe Lines do not lie *Eaſt* and *Weſt?*

VI. QUERE 121. *By the* ſame.

IF a ſmall Quantity of Air in a *Bladder*, when the Preſſure of the external Air is removed, will expand itſelf ſo as to burſt the Bladder; what hinders our Body of Air, or the whole elaſtic Atmoſphere, from expanding itſelf into the empty Space ſurrounding it?

VII. QUERE 122. *By Mr.* John Buddle, *of* Cheſter-lee-Stree

WHAT are Thunderbolts, and what is Thunder?

VIII. QUERE 123. *By Mr.* Paul Sharp, *of Biddenden, Kent.*

WHY does a Pair of *French Mill-ſtones* produce whiter Flowe than either *Cullens* or *Peak* Stones?

IX. QUERE 124. *By Mr.* Alexander Rowe.

WHAT is TIME?

X. QUERE 125. *By Mr.* Iſaac Tarrat, *of* Epſom.

Dic quibus in Terris inſcripti Nomina *Regum*,
Naſcuntur Flores? *et* Phyllida *ſolus habeto.*

Virg. Eclog. 3.

XI. QUERE 126. *By Mr.* Huntley.

WHAT is the Difference between *Modeſty* and *Humility?*

XII. QUERE 127. *By a* Paſtry-Cook.

A *Gingerbread-Bridge*, of eleven ſeparate Arches, is to be bui against the next Horn-Fair, near *Woolwich*, for the Entertainment of the curious: Required of Mr. *T. S.* F. R. S. *Uſurp* and principal *Compiler* of the *Ladies Diary*, the *exact* Dimenſio and *Form* of the Arches, ſo that the Bridge, of 1 Yard over, Foot deep, and 9 Inches wide, may be able to ſupport the great Weight *poſſible* that its *Matter* (being all *ſimilar*) can ſuſtain?

XIII. QUERE 128. *By* Amelia.

WHAT is Judgment?

XIV. QUERE 129. *By Mr.* Tho. Huntley.

ON what Day of the *Week* was 1ſt *January*, in the 1761 Ye current before *Chriſt*, reckoning back, from the preſent Ye current ſince *Chriſt*, both according to the *Julian* and *Gregori* Style?

*** *Who*

, *Whoever ſends true Anſwers to the following* Quere *by* Candle-s, *has a Chance, by Lot for* 4 *and* 2 Palladiums, *which will be* vered *in* London *according to Direction given.*

PRIZE-QUERE. *By Mr.* W. Williams, *of* Hackney.

'Tis ſaid the Perſian, *or* Galilean *Year is abſolutely the* beſt *and juſt*-*of all the civil Years yet invented; as being found by Calculation to* p *the* Solſtices *and* Equinoxes *preciſely to the ſame Days, and an*-ering *very accurately to the* ſolar *Motions, which no other civil Year* r; *not even the* Gregorian, *for Want of ſo commodious an* Intercala-on. *This* Galilean *Year that the* Perſians *began to uſe in the Year* 079 *current ſince* Chriſt, *was formed by an* Intercalation *made* 6 *or* 7 mes *in* 4 *Years, and then once every* 5*th Year :* Quere *the* Method *how* ſe *Intercalations were made ?*

NEW QUESTIONS.

I. QUESTION 183. *By the* Author.

IF the Product of the Places in the *Alphabet* of the two *initial* etters of an EMINENT PERSON's Name, who is a great *Promoter of* ence, be multiplied by the *Sum* of thoſe *Places*, they will produce 134; and if the *Quotient* of the *greateſt* of thoſe Places divided by e *leſs*, (the *Diviſor* being the Place of the *Surname*) be multiplied y the *Difference* of the Squares of the Number of Places, the *Reſult* ill be 1890: What are the two INITIALS of the HONOURABLE RSON's Name?

II. QUESTION 184. *By Mr.* W. Williams, *of* Hackney.

TO ſquare the Circle *mechanically*; The Diameter being 14 Feet, d Circumference 44 nearly?

III. QUÆSTIO 185. *A Dom.* Huntleio, *de* Burford.

DATUR *ſumma trigoni laterum* = 37,54123, *ratio quam baſis ſeg*-nta *inter ſe mutuo tenent, ut* 4 : 5; *et quanto baſis* κάθετον *longitudine* perat = 14 : *Undè inveſtigantor baſis et utrumque latus ?*

IV. QUESTION 186. *By Mr.* Buddle.

A Traveller calling at a Gentleman's Houſe, drank out of a *Sil*-r *Tankard*, full of ſtrong Beer, in Form of a conical *Fruſtum*, till e juſt ſaw the Edge of the Bottom, and drank four Ninths of the iquor; the Height of the *Tankard* was 6, and Bottom Diameter Inches; Required the *Tankard*'s Top-Diameter?

V. QUESTION 187. *By Mr.* Paul Sharp, *of* Biddenden.

THREE *Towers*, A, B, and C, are diſtant from one another as llows: from A to C is 10 Miles, from A to B is 9, and from B to C 7 Miles. A *Windmill* ſtands between them, whoſe Diſtance rom B is 3 Miles; and the Angle of Obſervation from the *Mill* to the *Towers*, A and C, is equal to 113° 26′: *Required* the Diſtance of the *Mill* from the *Towers*, A and C?

VI. QUESTION 188. *By* Urania.

TO find the Equation of the Moon's Center in *Syzygies* correſponding to 1^s 21° annual Argument?

VII. QUESTION 189. *By the* AUTHOR.

IF, in an Air-Pump, the Content of the *Receiver* be equal to oo cubic Inches, and the Content of the *Barrel* be equal to 30 cubic

Inches ; What Number of *Strokes*, or Turns of the Pump, will ra the Air under that Receiver, 800 Times more than in its natu State ?

VIII. QUESTION 190. *By Mr.* Geo. Stapley, *of* Scots-float,

A Gentleman lets a *Farm* at a 100*l. per Annum*, and agrees to all Tithes and Taxes ; and ſuppoſing them at 4s 6d in the Pound full Rents ; what muſt the Farm be taxed, and how much an Rent ſhould the *Tenant* give, he paying the Taxes ?

IX. QUESTION 191. *By the ſame.*

SUPPOSING the Inclination of a Plane with the Horizon to 48° 30′, required the Length thereof, ſo that a *Ball* deſcending alo the ſame from its greateſt Height, by the Force of Gravity will ſpe 5 Seconds longer in arriving at the Bottom thereof, than in freely falling through the perpendicular Height of the ſaid Plane ?

X. QUESTION 192. *By the* ſame.

A Son aſked of his Father his and his own Age, who was anſwered that the Sum of the Squares of both their Ages were equal t 3941.32 Years ; and that the Square of the Difference of their Ag added to twice their *Sum*, was equal to 2107.64 Years : *Required* th Father's and alſo the Son's Age ?

XI. QUESTION 193. *By the* ſame.

A Gentleman hired a Farm for the Term of 40 Years, who ga 40*l.* ready Money for the *Income*. He has already occupied it 30 Yrs. and juſt agreed with another *Occupier* to hold it on the ſame Terms fo the Remainder of the Leaſe : *How much* ready Money muſt the *ſecon* *Tenant* pay to the *firſt*, allowing them both 4 *per Cent* for their Money computing the *Intereſt* thereof half yearly ?

XII. QUESTION 194. *By Mr.* George Brown, *of* Portſmouth.

THE Diſtance from the *Vertex* of the Curve of a ſemicubical *Parabola* to the loweſt Point thereof, is equal to 46 Feet ; and the Length of the Curve itſelf is the *greateſt* poſſible ; Required the Dimenſion o that *Parabola* ?

XIII. QUESTION 195. *By Mr.* Henry Green, *of* Nottingham,

GIVEN the Solidity $=28953,1956$, and convex Surface $=3749,2$ of the *ſolid* formed by the Rotation of a Semi-*Parabola* about its *Axi* to find from thence the Dimenſions of the *Paraboloid*, and Solidity o the greateſt Cylinder that can be inſcribed therein ?

XIV. QUESTION 196. *By Mr.* T. Sadler, *of* Norbury.

TO find on what Day of the Year 1761, the *bright* Star in th *Eagle* ſets with the Sun at *Greenwich* Obſervatory ?

XV. QUESTION 197. *By Mr.* John Buddle, *of* Cheſter-lee-ſtreet,

REQUIRED the *ſuperficial* Content of the *greateſt Cylinder* th can be inſcribed in the *Fruſtum* of *a Globe*, whoſe Center of Gravity is 5,090909 Inches diſtant from the *Vertex*, and *Radius* of the whol Globe 10 Inches ?

XVI. QUESTION 198. *By Mr.* T. Huntley.

$\overline{x}|^{l.x} + \overline{l.x}|^{x} = 1000$: What is the *Value* of *x*, of whi $l.x$ is the *hyperbolic* Logarithm ?

XVI

VII. QUESTION 199. *By the* AUTHOR *of the* Royal ASTRONOMER *and* NAVIGATOR.

REQUIRED *the* Longitude *at Sea from* Greenwich-*Obſervatory*, *where* Moon's *true Place, reduced from her, viſible Place obſerved, is found to be* 29° 49′ 30″ *on the* 18 May, *at* 10 *at Night, in the Year* 1761 ?

XVIII. QUESTION 200. *By* Urania.

WHAT will be the Moon's Altitude at *Greenwich Royal Obſerva*-y at 12 at Night, on *Sept.* 13th 1761 ; and at what Time does the oon riſe and ſet on that *Aſtronomical* Day ?

IX. 201. *By Mr.* Thomas Harris, *of* Bugbrook, *near* Northampton.

Near *limpid Nine* in fam'd *Northamptonſhire*,
Bleſt with a fertile Soil and wholeſome Air,
Stands *Bugbrook*, || in a pleaſant verdant Mead,
Where ſpreading Trees extend their awful Shade ;
North, and North-weſt, at equal Diſtance lie
Two tow'ring Hills, whoſe Tops ſalute the Sky ;
Their perpendicular Heights I've often found
Are *ſixty* Perches from the level Ground ;
Their *equal Altitudes* † I found to be
To the *cæleſtial Bow* * as two to three.
Upon a *Summer*'s Day it happen'd ſo,
Both Hills were touch'd by the cœleſtial *Bow*.
From hence their Diſtances from *Bugbrook* Town,
And *Diſtance* from each other, pray make known ;
The *Month*, and *Day*, and *Hour*, too, make appear
In your *Palladium* for another Year.

|| *Lat.* 52° 15′. † *in Degrees.* * *Vertex of the outer Rainbow.*

N. B. *The Town and Hills, whence the Obſervation was made, are be conſidered as Points.— The Time of Obſervation was before the Sun* red *the* autumnal *Quarter.*

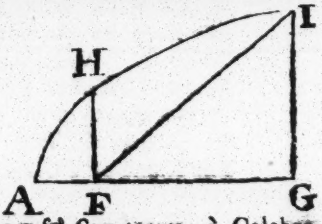
⁂ *Whoever anſwers the following Queſtion before the* 1*ſt of* March *has a Chance by Lot for* 12 *Palladiums, which will be delivered in* ndon, *according to Direction given?*

IZE-QUESTION. *By Mr.* Geo. Brown, *of* Portſmouth-Common.

LET the Curve AHI be the Curve a Conic Section, whoſe *Focus* is at F, HF, IG, Perpendiculars to AG.

hen will $FI = AF + \frac{\overline{FH - AF \times AG}}{AF}$:

quired the DEMONSTRATION this *curious* PROPOSITION ?



Vid. p. 10, *Theoria Motuum Planetarum & Cometarum*, *à* Celeber-
o Eulero.

NEW PARADOXES, REBUSES, &c.

I. PARADOX. *By Miſs* Willeter, *of* Epſom.

Juſt twenty-five Trees, in a *Dozen* Rows place,
Eight with *Six*, *Four* with *Five*, plant with regular Grace.

II. PARADOX. By *Numericus.*

IN the Year *Thirty-Nine** my Wiſe brought me a *Son*,
Who will juſt come of *Age* † in the Year *Sixty-One.* ‡

* 21 *Years old.* † 1739. ‡ 176

I. REBUS. By Mr. *Thomas Huntley* of *Burford.*

PART of a Country fam'd for Wine,
And half a *Digit*'s Name combine;
The Ending of a *Patriarch*'s too,
In ſacred Writ expos'd to View:
Connect theſe Parts, a Word you'll have,
Expreſſive of a faithful Slave.

II. REBUS. By Mr. *Thomas Sadler* of *Norbury.*

TAKE Half of a River in *Ægypt* well known,
Whoſe Banks in the Summer are often o'erflown;
Add *Ten*, with *Denial* revers'd, and you'll find
The Name of a *Fair One* more charming than kind.

III. REBUS. By Mr. *William Swift* of *Stow.*

To two Thirds of a River in *Cheſhire*, I own,
Add the Fruit of a *Tree* whoſe Perfume is well known,
Half the Name of a *Village* when join'd to the Reſt,
Gives a Town that in *Suffolk* has been in Requeſt.

IV. REBUS. By the ſame *Gentleman.*

TAKE an *L* from the Name of a Metal that's gay,
Add the *Place* where fierce Lions oft roar for their Prey;
Reverſe a *Denial*, and then you will find
My Fair One's *Abode*, that's both courteous and kind:
The Town, you will find, is in fam'd *Oxfordſhire*;
Four Letters (with *F*) make the Promiſe of my Dear.

V. REBUS. By Mr. *Thomas Holland* of *Marbury.*

WHAT Great Sir *John Barley-Corn* Pris'ner does keep,
And two *Fourths*, when revers'd, of what makes *Sylvia* w
Is the Name of a *Fair One*, I'll venture to ſay,
Whoſe Charms are delighting as *Flora*'s in *May.*

VI. REBUS. By Mr. *Thomas Sadler.*

JOIN the Haymaker's Wiſh in a fine Summer's Day,
When by Mirth they're invited to ſport and to play;
With a *Water* that's *ſhallow*; and thence you'll infer,
The Name of the *beautiful* charming Miſs R—.

VII. REBUS. By the ſame.

ADD one *Third* of a Number fair Ladies firſt write,
To one *Fourth* of what's every Miſer's Delight,
By the *Sum* of theſe two you may quickly unfold
The Name of a *Giant* recorded of old.

VIII. RE

☞ Pindarus *put our Friend to Expence of a Letter for his ſtolen* R
on Motram, *out of a Mag. One on a Thief would be a proper Subje*

VIII. Rebus. By Mr. *John Buddle.*

To the Name of a *Tree* that is tall and upright,
Which is frequently ſeen, and which three Letters write;
If you add what *'tis ſold for*, the Name 'twill complete
Of an amiable Damſel, both rich and diſcreet.

IX. Rebus. By *Honorius.*

Rara Avis in Terris, nigroque ſimillima Signo.

TO the Half of *what* ſcatters Men dead on the Plain,
What like *Lightning* ſtrikes quick, when the *Wounded* feel Pain,
Add the Name of a *Meaſure*, augmenting a *Yard*,
And a *Lady*, when *join'd*, you will find worth Regard.
If more of this *fair One* you languiſh to know,
You may ſearch *Pater Noſter*—the *Midſt* of the *Row*.

NSWERS to all the ÆNIGMAS in the PALLADIUM, for 1760.

A German Flute. II. A Glove. III. Ignis Fatuus, or Will with a Wisp. IV. Mustard. PRIZE. An Arrow.

The PRIZE ÆNIGMA *anſwered by Mr.* Swift, *of* Stowe.

Dear *Ladies*, beware of *Love*'s cruel Snare,
And keep your Hearts ſafe in your Breaſts,
Leſt *Cupid*, ſo ſly, ſhould an ARROW let fly, *Prize.*
And make you come off ſecond-beſt.

The ſame anſwered by Miſs Willeter, *of* Epſom.

Love, like an ARROW, ſtrikes exceeding ſure, *Prize.*
And its deep Wound what *Med'cine* e'er can cure?

All *the* Ænigmas *anſwered by Mr.* Chriſtopher Maſon.

Prince *Ferdinand* with SHAFTS our Foes ſalute. *Prize.*
Who dance to Muſic of the German Flute; 1.
Great Fred'ric will as ſharp as Mustard prove 4.
To *Auſtria*'s Queen, with *France* like Hand and Glove. 2.
The *Ruſſian Empreſs* had no Force to dread,
Till ſhe by Ignis Fatuus was miſled. 3.

ſwered by Mr. Thomas Harris, *of Bugbrook, near* Northampton,
In the Old Maid's *Advice to a Concert of* Young Females.

Ye charming *Maids*, now in refulgent Prime,
Forbear, like me, to waſte your precious Time;
Adorn'd with Gloves and other tempting Toys, 2.
Dance to the Flute of Wedlock's ſolid Joys. 1.
Nor Ignis Fatuus like, diſdain a Kiſs, 3.
If you would know the more ſubſtantial Bliſs:
But never ſeem too yielding, or too kind,
Altho' as hot as Mustard in your Mind. 4.
With decent Mien you ſhould at firſt be coy,
Then, by Degrees, advance to modeſt Joy:
Charm by your Carriage, and a lovely Grace,
And read *Affection* in your *Lover*'s Face;
Then as he loves, his Paſſion kindly treat,
Nor let him ſigh and languiſh at your Feet;

If

☞ Pindarus *of* Catherine Hall, Cambridge, *obſerves that* 2 Ænig. Pall. 1760, *was taken fr.* Gent. Mag. *for* Aug. 1733; *who only ber-* 'd Motram, *a Rebus, himſelf, but* 1 *Yr. ſince publiſh'd*—*We ſuppreſs'd.*

If worthy, treat him like the opening Roſe,
Unfold your Sweets, and all your Soul diſcloſe.
And if he preſſes for the *nuptial* Day,
With *modeſt* Speech *excite* his Undelay.
Swift Time does like a rapid ARROW fly,
And when too late, you may unpity'd die.
Perplex'd I live, long having loſt my *Bloom*,
And by my Folly now I know my Doom.

The ſame were anſwered in Verſe by Mr. *Thomas Sadler* of N *bury* (who ſent us three *New Ænigmas*, which, and Mr. *Holland* we are obliged to omit for Want of Room) by Mr. *John Know* Mr. *S. Pennington*, in the *Royal Regiment* of *Cheſhire Militia*; in Proſe Mr. *William Chapman* of *Foxton* in *Leiceſterſhire*; *Catherinus Can* of *Catherine-Hall*; alſo *Pindarus*, *Cambridge*, Mr. *Charles Green*, *Denmark-Street*, *Soho*, and Mr. *John Metcalf*, of *Wentwor House*, *Yorkſhire*.

☞ *Lots being fairly drawn for thoſe who beſt anſwered the* Ænigm *the* firſt *Lot of* 4 Palladiums *fell to Miſs* Green *of* London *(w Compoſition in Pindarics was too long to inſert) the* Second *Lot* o Palladiums *fell to Mr.* Thomas Harris *of* Bugbrook, *near* Nor ampton; *and the third Lot of* 2 Palladiums *fell to Mr.* Swift Stow, *near* Lincoln.

ANSWERS to the QUERIES in the PALLADIUM for 1760.

I. QUERE 102. Anſwered by the AUTHOR.

IF Knowledge ſelf-evident (according to Mr. *Locke)* neither mits of, nor requires any Proof, *Euclid*'s *Demonſtration* of *ſelf- dent* Propoſitions is like undertaking to demonſtrate that we *actu* ſee Light and Colours, and external Objects, or that we *actually* exiſt. *Locke*'s Diſtinctions between Knowledge *ſelf-evident*, Knowledge derived from the Fountain and Connection of ſelf- dent Truths, were not ſo well conſidered and defined by the *Anti* as Moderns. But *Euclid*'s Deductions, in Reſpect of *Poſtulata* mitted, and what is diſcovered as Truth, are accurate; being a co nued *Chain* of *infallible* Reaſoning and demonſtrative Concluſion

The ſame anſwered by the Propoſer.

ONE great Excellency and Perfection of any Art or Science i depend on as *few* fundamental *Axioms* or Principles as poſſible; therefore, in a regular complete *Syſtem* of elementary Geom *Euclid* did well to aſſume certain ſimple *ſelf-evident* Propoſitions of thoſe no more than was abſolutely neceſſary) for fundame Principles; and from theſe firſt and leading *Truths*, to deduce the greateſt *Strictneſs* all others, whether they be ſuch as lie open and expoſed to, or farther removed from, the immediate V of the Mind.

Moreover, the End and Deſign of geometrical Demonſtra is not only to elucidate the Truth of the *Propoſition* to which it re (though it may be the *principal)* but alſo to ſhew the *Connexion* w the Propoſition in Hand has with ſome firſt Principles or *previous*

po

ſition already proved; that ſo the *ſeveral Propoſitions* may ſtand con-ſted one with the other, and form a beautiful *Series* of well-ar-nged *Truths*.

II. QUERE 103. Anſwered by Mr. *Tarrat*.

CREDIT is of greater Advantage than Prejudice to Commerce; auſe three Fourths of the Eſtates acquired in *London* are by Perſons little or no Subſtance at their ſetting out; and the ſame may be ſumed as to the Eſtates acquired in other trading Parts of the ingdom, depending on original Credit. And it ſeems that nine aders in ten are benefited by Credit, tho' they may not acquire rtunes thereby.

It is from the imprudent and too large Credit, that the Prejudice Traders ariſes, ſince no one Perſon ought to riſk his whole For-e on any one Bottom, conſidering the Fluctuation of all human airs.

One very great *Nuiſance*, diſadvantageous to Trade, is the To-ration of *Hawkers* and *Pedlars* of all Sorts; to the foreſtalling putable Shopkeepers and Tradeſmen; and if I am rightly in-rmed, that *Office* brings not in above 10,000 *l. per Annum*, hich if aboliſhed, the Government would find itſelf advantaged ove four Times that Sum, *as may be demonſtrated, if required.*

The ſame was anſwered by Mr. *Chriſtopher Maſon*, and others.

III. QUERE 104, *anſwered by Mr.* Alexander Rowe.

Y D H M S
0 1759 13 8 0 0 in *Ja.* N.S. the Time when Ec. ☽ happen'd.
Add 18 10 7 43 20 a *Plinian* Period when 5 Lp-yrs intervene.
———————————— [*wich* Obſ.
1777 23 15 43 20 † in *Jan.* (on *Friday Morn.*) at *Green-*
Jan. 24 3 43 20 Morning, when Ecl. ☽ returns, required.

.W. *Chapman*, at *Foxton*, *Leiceſterſhire*, anſwered the ſame to be *Friday*, as above. Mr. *Chr. Maſon* the ſame, on a *Frid. Morn.*

IV. QUERE 105, *anſwered by Miſs* Willeter, *of* Epſom.

HE Twinkling of Stars (being at immenſe Diſtance) is cauſed *Atoms* floating in the Expanſe, intercepting and ſcattering the coming to our Sight. If we view theſe Stars through a Piece per with *Holes* pricked through it, they will appear ſteady. — Planets being very near to us, in Reſpect of the *fixed Stars*, reflected Light is propagated unbroken or ſteadily to us, without uption.

John Metcalf, Mr. *Chriſtopher Maſon*, Mr. *Alexander Rowe*, *hn Buddle*, and others, ſolved it in the ſame Manner.

V. QUERE 106, *anſwered by the* Author.

MPETENCE is the neceſſary and comfortable *Sufficiency* in *Drink*, and Clothing; without redundant *Luxury*, and extra-Ornaments in Dreſs; which is all Mr. *Pope* could mean.

The ſame anſwered by Mr. Alexander Rowe.

Pope means by the Word *Competence* a ſufficient Eſtate whereby may live decently, but not profuſely. And being poſſeſſed of

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Equation of a Period, in Time, muſt be connected. See our Roy-n. Of a Period in Time.

of ſuch *Competence* he may attain to other Endowments, which
neceſſary to his Station of Happineſs in Life.

A Competence *is Vital to Content,*
Much Wealth is Corpulence, *if not Diſeaſe*;
Sick or incumbered is our Happineſs,
A Competence *is all we can enjoy.*
Oh! be content where Heav'n can give no more!
More, like a Flaſk *of Water from a* Lock,
Quickens our Spirits Movement for an Hour;
But ſoon its Force is ſpent; nor riſe our Joys
Above our native Temper's common Stream.
Hence Diſappointment *lurks in every* Prize,
As Bees in Flow'rs, and ſtings us with Succeſs.
Young's Night Thoughts.

VI. QUERE 107, *anſwered by Mr.* Chr. Maſon.

AS there are *Snake-ſtones* found in *Yorkſhire*, marine Bone
Shells, ſuch as *Periwinkles*, found in Poſts or Blocks of Marbl
Suſſex, Variety of Oyſters and other Shells in *Chalk* Rocks i
Suſſex Cliffs, where no apparent petrifying *Menſtruum* has bee
ſerved, it is hard to ſay whether the *marine* Bones and Shell
been naturally produced and converted to Stone, or whether the
the *Luſus Naturæ*, or Sportings of Nature.

As for *ſubterraneous* Timber, of both Oak and Fir, found in
Quantities in ſeveral Parts of this *Iſland*, they might be lodg
Accident or Earthquakes, Inundations, or ſometimes War; or
may probably have lain ever ſince the *Deluge*. And as there a
ſame *Marks* found all over the known World as in this Iſland of
Britain, it is probable that the Deluge was *univerſal*.

VII. QUERE 108, *anſwered by Mr.* Chr. Maſon.

THE denſe humid *Vapours*, near the Horizon, magnify all
ſeen through them, by Means of *Refraction*. And when th
Moon, and *Stars* aſcend in Altitude, and are ſeen through a
Medium, to the naked Eye, they conſequently appear of leſs M
tude. A *Shilling* in a Baſon of Water looks about as big as
a-Crown ſeen in the Air; which accounts for the *Moon*'s l
larger through a denſer than *rarer Medium*. But if you rol
Sheet of ſtiff Paper in the Form of a Tube, of a Size for the M
Face juſt to fill it, obſerved near the Horizon, and then tie th
to that Bigneſs; and if you obſerve the Moon upon the *M*
through the ſame Paper Tube, ſhe will *(being nearer)* appea
larger than at the Horizon; when the *Deception*, by this M
removed.

☞ *The Moon is nearer to an Inhabitant on the Earth's*
when ſhe is ſeen in the Zenith, *by the Earth's Semidiameter, th*
ſhe is ſeen near the Horizon; and conſequently is apparently larg
nearer Diſtance. And ſo on, in a certain Proportion, when ſh
between the Zenith and Horizon.

Mr. *Swift* of *Stow* anſwered the ſame.

VIII. QUERE 109, *anſwered by Mr.* T. Huntley, *of* Burford.

SOUND, by Experiment, is found to move at the uniform Rate f 1142 *Feet* in a *Second* of Time. Therefore, $1142 \times 10\frac{1}{2}$ will produce the Diſtance of the Obſerver from the Cannon $= 11991$ Feet, or 2 *Miles*, 2 *Furlongs*, and 6 *Poles*.

Mr. *Chr. Maſon* anſwered it by the ſame Method and Numbers; as did Mr. *Alexander Rowe*, and ſeveral others.

IX. QUERE 110, *anſwered by Mr.* Thomas Huntley.

THE Anſwer to this *Quere* depends on three philoſophical Principles; the Firſt of which is, *That in a non-reſiſting Medium, all Bodies, great or ſmall, heavy or light, are accelerated alike.* The Second, *That the Spaces through which a heavy Body falls from Reſt at different Times, are as the Squares of thoſe Times.* The Third, *That Sounds are propagated through the Air with an uniform Celerity*— Wherefore putting $a = 16\frac{1}{12}$ Feet, the Deſcent of a heavy Body in the firſt Second, $c = 1142$ Feet, the Motion of Sound *per* Sec.; $s = 4\frac{1}{2}$ Seconds, and $x =$ the required Depth of the Well. Say, as $a : 1''$ $\times 1'' :: x : \frac{x}{a} =$ Square of Seconds the Stone was deſcending to the *Water*; and as $c : 1'' :: x : \frac{x}{c} =$ Seconds the Sound was aſcending to the Ear: Whence $\sqrt{\frac{x}{a}} + \frac{x}{c} = s$, by the *Quere*; which Equation modelled $x + \frac{c}{\sqrt{a}} \times \sqrt{x} = cs$, and by completing Square

$$x + \frac{c}{\sqrt{a}} \times \sqrt{x} + \frac{c2}{4a} = \frac{c^2 + 4acs}{4a} \text{ (put } m^2 = c^2 + 4acs\text{)}$$

Whence we have $\sqrt{x} = \frac{m}{2\sqrt{a}} - \frac{c}{2\sqrt{a}}$ and $x = \overline{m - c}^2 \div 4a = 290$ Feet *ferè*, the Depth of the *Well required.*

Mr. *Alexander Rowe* anſwers it in the ſame Numbers correctly.

Mr. *Chriſtopher Maſon*, by another ſhort and eaſy Method, finds the Depth of the Well very near the Truth, which an *eaſy*, ar, and *ready* Method was expected to find — Otherwiſe this *Quere* is more properly a *mathematical* Queſtion. Mr. *John Buddle* found the ſame, ſhortly, as did ſome others; but *Farak Longmate*, of *Portland-Street, Soho*, found the Depth 289 Feet only, who uſes the Word *Adept* in the Senſe of a Novice; yet he is Critic and Blunderer of the Correſpondents Queſtions and Anſwers printed in the *Imp. Mag.* See p. 377 of ∠DAC = 26′ for our 39′, &c. See alſo p. 436 *Imp. Mag.* ſhewing no *Judgment* or *Juſtice*. See the *Royal Mag.* always for the future.

X. QUERE 111, *anſwered by* Brittanicus.

THE Intent of this *Quere* was to ſhew that *Part* of *South America* lies in *North* Latitude, contrary to the *common Opinion*, that all *South* and *North America* take their Names from the South and North Sides of the Equator, on which they are reſpectively ſituated; whereas South *Britain* lies wholly in North Latitude.

The Boundaries of *North* and *South America* are beſt ſeen by the laſt and neweſt improv'd Maps, as there has been ſuch a contin Variation of thoſe Boundaries, by the *Spaniards*, the *French*, and t *Engliſh*.

XI. QUERE 112, *anſwered by Mr.* Alexander Rowe.

WIT is a Faculty of the Mind, conſiſting (according to Mr. *Loc* in the aſſembling and putting together of thoſe Ideas, with Quickn and Variety, in which any Reſemblance or Congruity can be foun in order to form pleaſing Pictures, and preſent agreeable Viſions to t Fancy, *&c.*

True Wit *is* Nature *to Advantage dreſs'd.*
What oft was thought, but ne'er ſo well expreſs'd;
Something, whoſe Truth, *convinc'd, at Sight we find,*
That gives us back the Image of our Mind.
As Shades more ſweetly recommend the Light,
So modeſt Plainneſs *ſets off ſprightly* Wit;
For Works may have more Wit than does them good,
As Bodies periſh through Exceſs of Blood.

POPE's Eſſay on Critici

WIT, how delicious to Man's dainty Taſte!
'Tis precious, as the *Vehicle* of Senſe;
But as it's *Subſtitute*, a dire Diſeaſe:
Pernicious *Talent!* flatter'd by the World,
By the blind World, which thinks the Talent *rare.*

YOUNG's *Night-Though*

Mr. *Iſaac Tarrat* of *Epſom* obſerves, that Wits are intitled to th Favour of Fools, becauſe Wit is an *Antitheſis* to Judgment, but ha no natural Connection with good Senſe or common Honeſty.

FALSE WIT's a Vapour in an Inſtant gone,
TRUE WIT is everlaſting as the Sun.

Mr. *T. Huntley* obſerves, thus on this *Quere*:

The all-wiſe *Creator*, who formed Man a *rational* Creature, h endued him with Faculties and Powers ſuited to his State; ſome the moſt uſeful of which are *Senſation, Reflection, Diſcernment,* *Memory*.

By *Senſation* and *Reflection*, the Mind of Man acquires its wh Stock of *Ideas*, ſo exceedingly various and numerous.

By *Diſcernment*, it is able to diſtinguiſh between *Idea* and *Idea*, to diſcover whether they are *different* or *identical*. And in the *M mory* it lodges and depoſites, as in a Storehouſe, *this ideal* Treaſ to be drawn out, and employ'd as Occaſion may require.

Now in having theſe *Ideas* in the Memory ready at Hand on Occaſions, conſiſts *Quickneſs* of Parts, *viz.* in the ready Aſſ blage and Conjunction of ſuch Ideas as bear ſuch a Reſemblanc each other, or form ſuch a *Contraſt*, as makes a lively pleaſant P ture in the *Fancy*, and ſtriking it with Delight and Surprize, prod what we call WIT.

Mr. *Swift* of *Stow* anſwered the ſame.

XII. QUERE 113, *anſwered by Mr.* T. Huntley.

WHEN the Mind has gained *Ideas* of ſuch Things as pre themſelves to it by the Senſes or the Underſtanding, and by compar them together, perceives their Agreement or Diſagreement, ſuc

Percep

Perception is called a *mental Truth,* as being the Reſult of true *Judgment,* or *Diſcernment :* and when this Perception is clothed in proper expreſſive Words, ſuch an Expreſſion is a *Truth* in *Propoſition.*

FOR Inſtance. *This Paper is white* ; the Idea ariſing in the Mind when the Eye beholds the Paper, and the Idea of *Whiteneſs* before lodged in the Memory, being compared and found to agree, the Perception of this Agreement is a *Truth* ; and this Perception properly expreſſed is a *true Propoſition.*

Again, *A Triangle is not a Circle* ; the Idea of a Triangle and a Circle being, upon a Compariſon found to *diſagree,* and this Diſagreement being ſeparated by the Words *is not,* the Propoſition above mentioned is called a *Truth.* Hence,

Truth, in general, is the perceiving and marking down in *Words* the Agreement or Diſagreement of our *Ideas* when compared together.

Mr. *Alexander Rowe* obſerves, that "*Veritas,* or Truth, is a Term uſed in Oppoſition to Falſhood, and applied to *Propoſitions* which anſwer or accord to the Nature and Reality of the Thing whereof ſomething is affirmed or denied." According to Mr. *Locke,* Truth conſiſts in the joining or ſeparating of Signs, as the Things ſignified by them do agree or diſagree one with another, *&c.*

Let Envy *howl, while Heav'n's whole* Chorus *ſings,*
And bark at Honour *not conferr'd by* Kings ;
Let Flatt'ry, *ſick'ning, ſee the Incenſe riſe,*
Sweet to the World, and grateful to the Skies :
TRUTH *guards the* Poet, *ſanctifies each Line,*
And makes-immortal Verſe as mean as mine.

Pope's *Satyrs.*

Mr. *Swift* of *Stow* anſwered the ſame.

XIII. QUERE 114, *anſwered by* Lucinda.

AS a *Shadow* is term'd the Privation of *Light,* exiſting to conſcious Perception ; ſo ſceptical Ignorance of what is perceptible to a rational Underſtanding may be term'd the *Privation* of Truth and real Knowledge, when a *dark Underſtanding* interpoſes. The *human* ſhape no more than the reptile Perception of a *Maggot,* or a Suit of Cloths made by an able Taylor, conſtitutes the *Species* of a *Man.* (See *Locke, Vol.* II. *p.* 191. *Whether Changelings are Men or no.*) And, according to *Newton,* as a true, ſupreme, or imaginary Dominion, makes a true, ſupreme, or imaginary GOD (ſee *Princip. Vol.* II. *p.* 389) ſo true, imaginary, or chimerical Ideas, conſtitute true, imaginary, or chimerical Knowledge. — See *Locke, Vol.* II. *p.* 185, *Of the Reality of Knowledge.*

☞ *Ignorance,* and Want of *Genius* and Capacity are *qualified* to diſpute any ſelf-evident or demonſtrative Truth ; as we find is often verified in *Newton's* Critics, who never underſtood the firſt Rudiments of Science. Some have criticiſed *Newton's* Fluxions, who never underſtood *common Arithmetic,* nor yet properly *common Senſe.*

Some are bewilder'd in the Maze *of Schools,*
And ſome made Coxcombs, *Nature meant but* Fools ;
In Search of Truth *they loſe all* common Senſe,
And then turn Critics *in their own Defence.*

Pope's Eſſay on Criticiſm.

Falſe Critics, like imperceptible Inſects, together with their little L *bours, that cannot be made the Subject of Obſervation without being* m *nified, die of themſelves after a ſhort Seaſon, being neglected.*—Pſhaw

*** WE would not ſuppoſe that the above Anſwer, by our f Correſpondent relates to a deceas'd *Eſſay on Criticiſm,* and *New* Th ry of Light and Gravity, born in 1757, after being begot ma Years before by an Author of ſingular Erudition. In which Se this *Production* may be ſaid to have lived many Years *before it* *born,* though it unfortunately died ſoon after. — For we have ceived ſeveral *Laconic* Remarks from our Correſpondents on the *am* *zing Criticiſms* contained in the ſaid *Eſſay,* firſt a Sixpenny-*Pamphl* and then the ſame augmented to a two Shilling one, by Half a Sh of *new Wonders* added, all tending to prove the uncommon Sagacity of the *critical Author,* which we may exhibit hereafter, for the Sat faction of the *curious.*

PRIZE-QUERE, *anſwered by Mr.* Alexander Rowe.

THE Creation, according to Archbiſhop *Uſher,* (of good Auth rity) happened in the Year 710 of the *Julian* Period. But Sir *Iſ* *Newton* makes the Creation of the World later by 500 Years th any other Chronologiſts; the *Baſis* of which he founds on two *ex* *lent Deductions,* (Which I ſhould here inſert if Room permitte Whence, if to 710 we add 500, the Sum is 1210, the Year *curr* of the *Julian* Period, correſponding with the **Time** of the Worl Creation.

MOREOVER, ſince the Birth of *Chriſt* happened in the 4712 Y current thereof, according to *Newton,* (very probably) if from th *Æra* we take 1210 current, there remains 3502, the Year of Cr tion current before *Chriſt*; and ſince the *Julian* Style commenced the 1ſt of *January,* being *Friday,* in the 45 Year current befo *Chriſt, (ſee* Hodgſon'*s Chronology, p.* 55.) if from 4712 current deduct 45, the Reſidue is 4667 current, and not 4669, as in hi *Chronology, p.* 48) the Year of the *Julian* Period agreeing with th Style, of *Julius Cæſar*'s reforming the Calendar.

Hence from theſe Deductions and others, I conclude that th Creation happened in 1210 Year current of the *Julian* Period, 3503 Year current before *Chriſt,* on *Tueſday,* 16th of *December,* (Dom. Letter being *infallibly* E to that Date;) though *Hodgſon*'s Ch nology makes the *Creation* 3950 current before *Chriſt,* the Dom. Le ter *infallibly* E.

The ſame *anſwered by Mr.* Chriſtopher Maſon.

IN the 764th Year current of the *Julian* Period, or 3949 curre before *Chriſt,* (taking 4713 *Jul.* Period current at *Chriſt*'s Birth) be on *Thurſday,* the 4th Day of the Week, 22 *April,* the World w probably made.

But by *Rule, p.* 55. *Paſſ.* 1759, Cycle ○ 9, and Dom. Letter in *fallibly* DC, Adam *was made on* Saturday, 24 April.

The ſame anſwered by Mr. W. Williams *of* Hackney.

THE Sun was created, as is generally ſuppoſed, on the Point the *Autumnal Æquinox,* or on *Thurſday, Oct.* 25th, reckoning Day to begin at Sun-ſetting before, and that the *Sabbath* was on S ly, as it certainly was before the Time of *Moſes*; and the ***Moon*** was en a great Light.

The World was created in the 4008 current Year before *Chriſt*, or 706th Year of the *Julian* Period, (taking 4714 *Julian* Period rent at *Chriſt*'s Birth) the Cycle of the Sun 6, Dominical Letter *fallibly* G.

In the Longitude of *Babylon*, and at Sunſet on *Wedneſday*, Oct. 24, e Sun was in 29° 8′ of *Virgo*, and the Moon in 10° 20′ of *Aries*, hich is a *remarkable* Poſition to fix the Year of Creation.

☞ *What Doubt and Uncertainty!* — See *Bedford's* Scripture Chronology.

Epochas of *Creation* collected by Mr. *W. Williams*, according to different *Authorities*.

	Commen.	*Jul. Per.*	*Years bef.* Chriſt	*Yrs ſince Creat. to* 1760 *ſince* Chriſt
mputat. of the us.	*Octob.* 7	953 *bef. Julian Period*	3761	5520
the *firſt Greek* rians, inven- by *Julius Af-* nus.	. . . . .	787	5501	7260
ter *Greeks* and ſſians	Sept. 1	795	5509	7268
ndrian Epo- , by *Panodorus*, onk of *Egypt*	Aug. 29	780	5494	7253
Euſebius	*Autumn*	*Jul. Per.* 486	4228	5987

What Doubt and Uncertainty is here!

☞ The *Julian* Period is 6473 in the 1760 Year ſince *Chriſt*.

Yr Jul. Per.

☞ We obſerve that Mr. *Rowe* makes 4712 curr^t at Birth Chr.
Yrs. Dif. *in reckoning the* } Mr. *Maſon* 4713
nt *Year of* Jul. Period. } Mr. *Williams* 4714 as in our *Royal Aſtronomer and Navigator*, and as marked by *Mayer*, in his Aſtronomy, and other ingenious Foreigners; *with* h Mr. Randles *alſo agrees.*

ence the Difference of reckoning the Year of *Julian* Period nt at the Birth of Chriſt, makes the Difference in the Year nt before Chriſt at Creation, and other chronological *Æras* — h *are never likely to be ſettled, while ſo many Opinions and Judg*- *are divided about them. And we can only go by the* beſt *Authorities* ted.

Answer *to the* Prize Quere, *attempted by Mr.* John Randles, Aldridge-School, *in* Staffordſhire, *but late of* Wem, Salop.

To the Palladium Author.

SIR,

is no *new Madneſs* to ſearch for the Birth-day of the World. *Spring Equinox* has been the *Favourite* of many Theoriſts; and the *autumnal* has not wanted learned Patrons. But I cannot ſee w the *Solſtices* have not as fair a *Chance* to be the Time of the *unive* *Origination.* And really, Sir, much may be ſaid on both Sides — more eſpecially for the *Summer Solſtice.* —

Man came adult out of the Hands of his Maker; the whole *a* *mal* World probably came forth in the ſame State; and why not *getable* Nature likewiſe?

In *Summer* the *perennial* Plant appears in its perfect Growth, wi *its Seed in itſelf*, either in full *Capſules* ready to fall, or maturing withi the Boſom of the ſplendid Flowers. —

According to the *Egyptians*, the Fathers of aſtronomic Learni the *firſt Light* that dawned upon the Earth came from the Sun in *L* new kindling the Eaſtern Horizon; while *Aries* was mounted in M Heaven (*Macrob. in Somn. Scip. Lib.* I. *Cap.* 21.) At the T when *this Doctrine* was current, the Sun's Poſition at the *Sum* *Solſtice* was in the anterior Part of the Conſtellation *Leo.*—Well—

But in what Year of the Julian *Period the World had its Riſe, is* Quere *to be reſolved?*

[*Mr.* Randles *now,* *by a Miſconception, complains that there is* *poſed in this Quere what was to be proved,* viz. *that the* Julian Pe *commences prior to the Beginning of the World. And thereby preju* *and rejects the Patrons of the moſt probable Computation*, unheard. herein he miſtakes; becauſe the *Quere* demands in what Year be Chriſt, was the Univerſe (*moſt probably*) created, to which the *Ju* Period is ſuppoſed correſpondent, whether it began before or Creation. — *He proceeds.*]

The firſt Step, in anſwering this *Prize-Quere*, is to find the T of the *Reſtoration of* Jeruſalem *to the Captive* Jews. This happene the firſt Year of *Cyrus*'s Reign at *Babylon*, (*Ezra* 1.) which fr *Collation* of many *Dates*, in profane Hiſtory, appears to be in the before *Chriſt* 536 — 70 Years (in 606 *bef. Chr.*) was the Begin of the *Captivity*; being the firſt Exportation of the *Captives* menti *Dan.* i. 2. — But in 588 *before Chriſt*, was the utter Deſtruction o City of *Babylon* by Fire, and the Deſolation of that Kingdom by *buchadnezzar.* From which laſt Date count back 390 Years *Ezek.* iv. 5.) to the Defection of the *Iſraelites* in the third and fo Year of *Jeroboam*, and 40 Years thence to the Founding of *Sol* Temple, we come to 1018 Year before *Chriſt.* — The *Exit* o *Hebrews* from *Ægypt* was 480 Years earlier, (i. *Kings* 6. 1.) *i.* the 1498 Year before *Chriſt*, and 3216 of the *Julian* Period. *here Mr.* Randles *makes the Year of* Julian *Period at the Birth of* C 4714, *wherein he ſuppoſes no more than the Quere ſuppoſed, with* *Regard to the World's Beginning before or after its Æra.*] The *H* Family were Sojourners in *Canaan* and *Ægypt* during 430 (*Exod.* xii. 40.) which carries us back to *Abraham's* ſecond C the Year of *Julian* Period 2786, and in the 1928 Year before *Ch* *And here we fix our Foot.*

Will not then your ſacred *Chronologiſts* ſay, with a Scale of *archal Generations* in their Hands, from *Geneſ.* v. and xi. Chap. *here a Ladder for mounting up to the very Year of Creation?* —

ot every Step of this *Ladder* uncertain — The *Numerals* in thoſe Chapters in the *Hebrew Text* have been evidently corrupted — Shall e follow then the *Numerals* in the *Samaritan?* Or thoſe in the *Sep-uagint*, a very ancient Verſion? Or ſhall we follow thoſe of *Joſe-hus*, who had the Uſe of ſome of the *ſacred Books* of the Temple? For further Satisfaction with Regard to Mr. *Maſon's important Quere*, onſult the *Univerſaliſt*, Vol. I. Book I. Which Authors follow the *Samaritan*: but I ſhould prefer the *Septuagint*.

I am Sir, &c.

John Randles.

☞ OUR Correſpondent has, as above, repreſented, that all this art of *Chronology* (even againſt what Sir *Iſaac Newton* himſelf has dvanc'd on the Subject) is but a *learned Juggle*, or *ſacred Confuſion*. We reſerve his *long Letter* for the Inſpection of the *curious*, con-aining alſo (as he thinks) a *Confutation* of the *Anſwers* to the *rize-Quere* in the *Palladium* for 1759. Wherein (among other ſtu-endous Relations) he is pleaſed to *remark*, "That thoſe who gave Mr. *Maſon* an equal Chance with his *two Competitors* for the *Prize*, were not aware that his Account is the ſame with the Monk *Den-nis's*, who inſtituted the *vulgar Æra* of *Chriſt* in the 6th *Century*. That it was then ſuppoſed *Chriſt* was born at the End of the Conſu-late of *Lentulus* and *Piſo*, 6 Days before the Expiration of the Year of the *Julian* Period 4713 — The next Year being the firſt after his Birth, is called the *firſt Year of our Lord*; but he never met with one Writer that attempts to juſtify this *Calculation* — It is every where retained, (he ſays) becauſe legally eſtabliſhed, and is every where condemn'd."

⁂ *The foregoing Determinations of the Time of Creation being, as* .Randles *obſerves, a* doubted, myſterious, *and* uncertain *Affair*, have given *Mr.* Randles *an equal* Chance *with the other three Com-itors, for the* Prize-Palladiums; *and Lots being fairly drawn, the* t of 4 Palladiums *fell to Mr.* Chriſtopher Maſon, *near* Eaſtburn, ſſex, *by a firſt Drawing; and the other Lot of* 2 Palladiums *fell to* .Randles, *of* Aldridge-*School in* Staffordſhire.

ANSWERS to the QUESTIONS in the *Palladium*, for 1760.

I. QUESTION 162, *anſwered by* Cheſterfieldienſis.

Ds. Men Ds. Men

AS 64 : 6500 :: 84 : 4952, *inverſely*: which taken from 6500 en, leaves 1548 Men to be *diſcharged*, for the Proviſions to hold t.

THE ſame was correctly anſwered by Mr. *Stapley*, of *Scots-float*, r Rye; Mr. *Alexander Rowe*, of *Penzance, Cornwall*; Mr. *Chriſt.* ſon, of *Eaſtburn, Suſſex*; Miſs *Willeter*, of *Epſom*: Mr. *Charles* w, of *Denmark-ſtreet*; Mr. *Tho. Huntley, of Burford*: Mr. *Com-*, of *Epſom*; Mr. *John Metcalf*, of *Wentworth-houſe, Yorkſhire*; *Jſ. Woofe*, of *Scarborough*; Mr. *John Buddle*, of *Cheſter-lee-*; and a great many others.

II. QUESTION

II. QUESTION 163. *anſwered by Mr.* Joſ. Woofe.

AS 7 Weeks : 24 oz. :: 14 Weeks : 12 Ounces, *inverſ* And, 8000 Men : 12 oz. :: 6500 Men : $14\frac{10}{13}$ Ounces, ea Man's daily Allowance.

THE ſame was *correctly* anſwered by Mr. *Stapley*, *Cheſterfieldienſi* Mr. *S. Pennington*, in the Royal Regiment of the *Cheſhire* Militia Mr. *Alexander Rowe*, Mr. *Green*, Mr. *Tho. Holland*, Mr. *T. Huntl* Mr. *J. Biddle*, and many others.

III. QUESTION 164, *anſwered by Mr.* Huntley.

☞ For anſwering all ſuch Queſtions as theſe, there is THIS UNIVERSAL RULE OF PROPORTION.

1. *Set down the Terms expreſſing the Conditions of the Queſtions in* *Line, and in any Order.*

2. *Under each conditional Term ſet its correſponding one in a Line beneath.*

3. *Multiply the* producing Terms *of one Line, and the* produc Term *of the other Line continually and take the Reſult for a Dividend.*

4. *Multiply the* remaining Terms *continually, and let their* Produ *be the Diviſor.*

5. *The* Quotient *of this Diviſion will be the* Term required.

By *producing Terms* is here meant, whatever neceſſarily and joint produce *any Effect:* As the *Cauſe* and the *Time*; *Length*, *Bread* and *Depth*; The *Buyer* and his *Money*; *Seller* and his *Commodities*, all neceſſarily inſeparable in *producing their ſeveral Effects.*

In a Queſtion where a Term is underſtood and not expreſſed, t Term may be repreſented by *Unity.*

THIS RULE *is ſo* general, *as to comprehend all* Caſes *that come un the* common Rules *of* 3, *whether* direct *or* inverſe, *or ſingle, or any W compounded.*

m.	ds.	h.	l.	w.	d.	
250	6	12	236	4	3	
50	2	10	350	16	4	ds.

$$Q=\frac{250\times6\times12\times350\times16\times4}{50\times1\times10\times236\times4\times3}=284\tfrac{44}{47}\text{ req}^{d}.$$

The ſame anſwered by Mr. John Metcalf, *of* Wentworth-Houſe.

INVERSELY, as $250^{m} : 72^{h} :: 50^{m} : 360^{h}$; *Now*, directly 2832 Yds ſolid ; 360^{h} :: 22400 Yds ſol. ; $2847{,}45^{h} = 284.745$ Days of ten Hours long.

The ſame was truly anſwered by Mr. *Geo. Stapley*, Mr. *Chriſto Maſon*, by Mr. *S. Pennington*, in the Royal Reg^{t} of *Cheſhire* Mili by *Cheſterfieldienſis*, Miſs *Willeter*, Mr. *Green*, Mr. *Huntley*, Mr. C *poſt*, of *Epſom*, Mr. *Buddle*, Mr. *Joſ. Woofe*, and others.

IV. QUESTION 165, *anſwered by Mr.* Alexander Rowe.

RULE for PROJECTILES hitting OBJECTS on DESCENTS.

1. *As Radius : to given Diſtance :: ſo Sine Object's* ∠ *of Dep on : to* Fourth No.—*To which add* twice *the* Impetus *and note the*

2. *Then, As the Object's Diſt. : is to that Sum :: ſo is Fourth No Fifth — to be taken from the Object's given Diſtance, and note Hal Difference.*

3. *NOW, As Impetus : is to half the ſaid Difference :: So is Radi to the Sine of an* ∠.

Half the Sum of which ∠ *and the* ∠ *of the Object's* Depreſſion *deducted from* 90° *will give the* ∠ *of* higher *Elevation, and half Differ. will give the* ∠ *of* lower *Elevation.* See *Holliday's* Gun *p.* 153.

1. As Radius : to 7333 :: ſo is S. 11° : to Fourth No. 1399.2 :

Now, Twice the *Impetus* = 8190 + 1399.2 = 9589.2 ;

2. Therefore, as 7333 : 9589 :: 1399.2 : 1829.7 = a Fifth No.

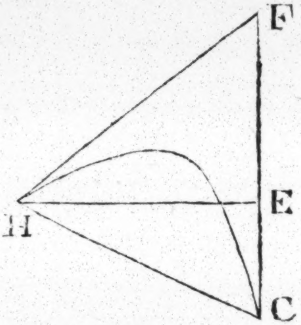
And $\frac{7333-1829.7}{2}$ = 2751.6 = half *Difference*.

3. Now, As *Impetus* 4095 : to $\frac{1}{2}$ Diff. 2751.6 :: ſo is Rad. : to 42° 13′.

Hence, $90° - \frac{42° \; 13' + 11°}{2} = 63° \; 23'\frac{1}{2}$ = *Higher Elevation*.

And, $\frac{42° \; 13' - 11°}{2} = 15° \; 36'\frac{1}{2}$ = Lower Elevation. W. W. R.

The ſame anſwered by Mr. Geo. Brown, *Mathematical Maſter, at* Portſmouth-Common.



GIVEN HC = 7333 Feet, ∠CHE = 11°. Then, by Trigon. HE = 98.2715243 = *c*; EC = 1399.202397 = *d*; *a* = 16 $\frac{1}{12}$ Feet; *b* = 8190 , the Projectile's *greateſt horizontal* ndom.

From my Solution in p. 52 and 53 ll. 1760, $\sqrt{2ab}$ = *Projectile*'s Veloci- in 1ˢ Time; *x* = *Seconds* the Projec- is in Motion.

Then, CF = *axx*, EF = $ax^2 - d$, HF = $x\sqrt{2ab}$; alſo *per* 47. *c.* 1, $c^2 + \overline{ax^2-d}|^2 = 2abx^2$; ∴ $= \frac{b+d\pm\sqrt{b^2-2bd-c^2}}{a}$.

Whence, as *c* : Radius 1 :: $b \pm \sqrt{b^2+2bd-c^2}$: $\frac{\pm\sqrt{b^2+2bd-c^2}}{c}$ = 1.996723 or ,2793739, anſwering to the ngents of 63° 23′ 27″ 39‴ 36iv and 15° 36′ 32″ 18‴ 54iv pectively, the upper and lower Angles of *Elevation*. Q E I.

☞ *Mr.* Huntley *elegantly and accurately ſolved this Queſtion, in ſame Numbers, by a different Method ; and gave a* general Con- ction. *Who likewiſe gave a trigonometrical Method of Solution of ſame, like Mr.* Rowe's *above ; chiefly ſerving for* Practice. *Mr.* hn Buddle *alſo anſwered it in the ſame Manner.*

The ſame was correctly ſolved by Mr. *Geo. Hicks*, Teacher of *Reed-* Free-ſchool, near *Howden, Yorkſhire.* Mr. *S. Pennington*, of the yal Regiment of *Cheſhire* Militia ; Mr. *Joſ. Woofe*, Mr. *Wm. Chap-*

Emendation, p. 32. l. 31. for 50.2.10.350, &c. r. 50.Q.10.350.16.4.

man, of *Foxton*, *Cheſterfieldienſis*, Mr. *Green*, of *Denmark-ſtree*
and a great many others ; all curiouſly and correctly.

V. QUESTION 166, *anſwered by the* AUTHOR.

If the Breadth of a Channel of running Water be = a *Feet*, *and*
ty of it's Stream v *Feet in a Second of Time, the Quantity* f *Feet*
caſioned by an Impediment that takes up b *Feet of the Breadth of that*
nel, *will be known by the following* general *Rule.*

PUT $A = \bar{2}.1913861$ *Log.* $B = 0.0757207$ Log. ; $c = \frac{}{a-}$

$C = $ Log. c ; $D = 2 \times B + C = $ L. d.

Then we have this GENERAL RULE. L. $f = $ L. $\overline{d-}$
2 L. $v + A = $ Log. of the *Fall* in Feet.

$c = \frac{1000}{280}$ . . L. $c = C = 0.5228420$

$v = 3$ $\qquad B = 0.0757207$

$B + C = 0.5975627$

$d = 15.67204$; L. $d = D = 1.1951254$

See *p.* 12 *preceding* Gardiner's *Logarithms*,
by the late *W. Jones*, Eſq. F. R. S.

L. $\overline{d-1} = 1.666$
2 L. $v = 0.954$
$A = \bar{2}.191$

L. $f = 0.812$
Hence, $f = 6.488$

greateſt *Fall*, requi

Mr. Chr. Maſon *ſolves it thus.* Put $a = 1000$; $b = 3$

$c = 280$; Then $a : b :: c : \frac{ab}{c}$; Again, $a : \frac{ab}{c} :: c :$

$\sqrt{114,668366} = 10,7083$ Feet, the greateſt Fall.

Mr. Rowe *anſwers it thus.* Put $a = 1000$, $b = (1000-720)$
$c = 3$; and $x = $ Velocity in *Feet* per Second (generated by Co
tion of the Fluid ;) and let $u = $ Depth ; Then $bux = acu$ (be

the *Momentums* are equal) by *Theory* of Rivers. Hence, $x = \frac{}{b}$

10.714 &c. *Feet*, the greateſt Fall.

☞ *The above Velocity is a little too much, becauſe of the Fri*
the Particles of the Fluid againſt the Piers, in their Paſſage.

OBSERVATION. The Fall is certainly computed too gre
both Mr. *Maſon* and *Rowe* ; and we find none of our Correſpo
agree with the *Principles* we have given the *Solution* from.

VI. QUESTION 167, *anſwered by Mr.* W. Williams, *of*
ney, *only.*

Jul. Per.
4714 in 1ſt Yr. ſince *Chr.* cur^{t}
— 706 current, *J.* Period.
——
Ys. bef. C. 4008 cur^{t} in 706 Y^{r} *Jul.* Per^{d}.

4007 Y^{r} bef.
leſs than current
+ 1793 Yr cur. ſince
——
5800 comp. fr. 400
to 1793 ſince

	☉ M. Place.					M. Pl. ☉ Apog.				
Since *Chriſt.* A. D. 1793, O. S.	9^{s}	21°	25′	26″	6‴	3^{s}	9°	12′	11″	0‴
Mot. 5800 —	1	14	0	56	0	3	7	44	26	40
er.706 or 4008 bef. *C.*	8	7	24	30	6	0	1	27	44	20
Apr. 24	3	22	21	49	33				18	57
.706 Apr. 24 ☉ M. Pl.	11	29	46	19	39	0	1	28	3	17 —
Equat. ☉'s Center			+ 3	22	28	11	29	46	19	40
☉ true Pl. Sub.	11	29	49	42	7	11	28	18	16	23
From	12					☉ M. Anom.				
Rem.	0	0	10	17	53					
Hours 4		Sub.	9	51	23					
Rem.				26	30					
Min. 10			Sub.	24	38					
Sec. 45. Thir. 24				1	52					

J. P. 706
Sun's M. An. July 26
$2^{s}29^{\circ}57'55''34'''$
Equat. ☉ Cen. — 1 56 18 51
☉ m. an Ja 20 $8^{s}25^{\circ}39'29''3'''$
Equat. ☉ Cen. + 1 56 9 36

	Sun's M. Place.				
706 or 4008 bef. *Ch.*	8^{s}	7°	24′	30″	6‴
Octob. 23	9	21	45	5	30
Sun's M. Place	5	29	9	35	36
uat. Sun's Cent.			— 4	48	12
n's true Pl. Sub.	5	29	4	47	24
From	6				
Rem.			55	12	36
Hours 22			54	12	38
Rem.				59	58
Min. 24				59	8
Sec. 20 Thir. 24					50

J. P. 707
s ° ′ ″ ‴
Sun's M. An. *Ap.* 24 11 28 2 55 57
Equat. Sun's Center + 4 53 9
d. h. m. s. th.
Vern. Equ^{x}. *Ap.* 24 9 47 12 24 Eq. T.
Abſ. Equ. Time — 23 40
Apr. 24 9 46 48 44 Ap^{t}T.

J. P. 2366.
d. h. m. s. th.
Vern. Equ^{x}. *Ap.* 10 11 0 46 48 Eq. T.
Abſ. Equ. Time — 4 3 10
Apr. 10 10 56 43 38 Ap^{t}T.

	d.	h.	m.	s	th.	
Julian *Period* 706, *Vernal Equinox*, *April*	24	4	10	45	24	Equal Time
Abſolute Equation of Time			—	17	1	
April	24	4	10	28	23	Appar. Time
Julian *Period* 706, *Summer Solſtice*, *July*	26	12	12	20	24	Equal Time
Abſolute Equation of Time		—	7	56	2	
July	26	12	20	16	26	Appar. Time
Julian *Period* 706, *Autum. Equinox*, *Octob.*	23	22	24	20	24	Equal Time
Abſolute Equation of Time			+	1	7	
Octob.	23	22	24	21	31	Appar. Time
Julian *Period* 706, *Winter Solſtice*, *Jan.*	20	22	57	15	24	Equal Time
Abſolute Equation of Time		—	7	23	54	
Jan.	20	22	49	51	30	Appar. Time

Jul. Per.
4714 in 1ſt Yr. ſince *Chr.* current
2365 curr. Jul. Period
——
Yrs. bef. *Chr.* 2349 curr. in 2365 Yr. Jul. Per.

2348 Yrs. bef. *Cb.*
than current.
+1752 Yrs. cur. ſin
——
4100 Yrs. from 2349
to 1752 ſince *Chr.*

	Sun's M. Place.					M. Pl. Sun's Ap.					
A.D. 1752 ſince *Chr.* O.S.	9ˢ	20°	22′	24″	44‴	3ˢ	8°	30′	43″	40‴	
Yrs. Mot. 4100 —	1	1	6	52	0	2	9	5	33	20	
Ju. Pe. 2365 or 2349 bef. *Chr.*	8	19	15	32	44	0	29	25	10	20	
Apr. 10 Biſſ.	3	9	33	1	16				16	47	
Sun's M. Place	11	28	48	34	0	0	29	25	27	7 —	
						11	28	48	34	0	
Apr. 10 Biſſ. Eq. Sun's Cen.	+ 0	58	10	56		10	29	53	6	53	Sun's M. A
July 13 B.	— 1	41	42	50		2	2	1	54	14	
Octob. 12 B.	— 0	57	54	48		5	0	44	8	55	
Jan. 8 B.	+ 1	40	30	1		7	28	42	35	52	
J. P. 2366 Apr. 10	+ 0	58	37	32		10	29	7	46	38	

		d	h	m	s	th	
Julian *Period* 2365, *Vernal Equinox*,	April	10	5	22	32	25	Equal
Abſolute Equation of Time			— 3	56	45		
	April	10	5	18	42	40	Appar
Julian *Period* 2365, *Summer Solſtice*,	July	13	5	43	16	48	Equal
Abſolute Equation of Time			+ 6	52	18		
	July	13	5	50	9	6	Appar
Julian *Period* 2365, *Autum. Equinox*,	Oct.	12	19	23	58	48	Equal
Abſolute Equation of Time			+ 3	35	55		
	Octob.	12	19	27	34	43	Appar
Julian *Period* 2365, *Winter Solſtice*,	Jan.	8	4	45	0	25	Equal
Abſolute Equation of Time			— 6	37	32		
	Jan.	8	4	38	22	53	Appa

J. P. 706, Apr. 24ᵈ 4ʰ 10ᵐ 28ˢ 23ᵗʰ J. P. 706, Oct. 23ᵈ 22ʰ 24ᵐ

	Apr.	5	19	49	31	37		Oct.	7	1	35
	May	31						Nov.	30		
	June	30						Dec.	31		
	July	31						Jan.	31		
	Aug.	31						Feb.	28		
	Sep.	30						Mar.	31		
J. P. 706,	Oct.	23	22	24	21	31	J. P. 707.	Apr.	24	9	46

182 11 13 53 8 Fr. ♎ to ♈ 182 11 22

	d	h	m	s	th		d	h	m	s	th
J.P. 2365, Apr.	10	5	18	42	40	J. P. 2365 Oct.	12.	19	27	34	43
Apr.	19	18	41	17	20.	Oct.	18	4	32	25	17
May	31					Nov.	30				
June	30					Dec.	31				
July	31					Jan.	31				
Aug.	31					Feb.	29				
Sep.	30					Mar.	31				
Oct.	12	19	27	34	43.	J. P. 2366 Apr.	10	10	56	43	38

From ♈ to ♎ 185 14 8 52 3   From ♎ to ♈ 180 15 29 8 55.

☞ This Gentleman is not only verſed as above in the Subject; but in Method alſo. We, having received no Anſwer but his, ſhall only obſerve that the mean Anomaly ☉ being found from the true 0, 3, 6, and 9 Signs (according to our Table in the Royal Aſtronomer) and thence the Time of Equinoxes and Solſtices correſpondent, they will be accurate.

VII. QUESTION 168, *anſwered by Mr.* Huntley.

THE eaſieſt and moſt familiar Method of meaſuring Timber by Weight, is to chuſe ſeveral Pieces of *Oak*, or any other *Wood*, containing juſt 1 *cubic Foot*, (and thoſe *Pieces* of different *Dryneſs* and *Denſity*) and when their *Weights* are exactly aſcertained, to make them the *Standards* by which to find the Solidity of *any Piece*.

And to adapt this Method more to Practice, Points expreſſing thoſe Weights may be made on the Line B, on the *Sliding Rule*; then ſet the Point on B to 1 on A, and againſt the Weight on B is the *Solution* on A.

Put $a = 57, 95$ lb. the Weight of 1 *cubic Foot* of dry Oak, $w = 1736$ lb. the Weight of the Tree, then $\frac{w}{a} = 29, 95$ Solid Feet.

☞ *We judge the foregoing Method of meaſuring Timber by Weight will never be brought into Practice, as not ſuiting with the preſent ſuppoſed Practices and Corruptions of meaſuring Timber in Dock-Yards and other Places.*

Mr. *John Buddle* anſwers thus;

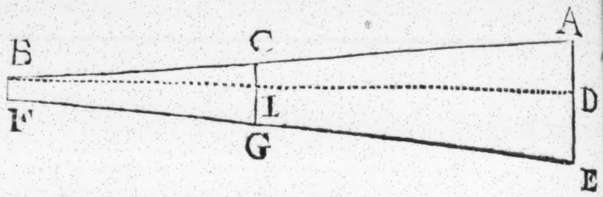
BY *Emerſon's Mechanics*, p. 159, put $n = 0,5787$ Ounces *Avoirdupoiſe*, $D = ,920$, the ſpecific Gravity of 1 ſolid Inch of Oak, $x =$ Solid Inches in the Tree; then as $1 : n D :: x : 27477$ Ounces, the Weight of the Tree; Whence $x = 51609$ ſolid Inches $= 29,866$ Solid Feet, *required*.

Mr. *John Metcalf*, of *Wentworth-Houſe*, ſuppoſing a cubic Inch of dry Oak, weighing ,536569 oz. *Avoirdupoiſe*, by a *ſimilar* Method to the above, finds the Weight of the Tree $= 15$ Hundred $\frac{1}{3}$, or 26532 Ounces, $= 28.6158$ ſolid Feet — referring to Mr. *Emerſon*'s Mechanics, which is a very *uſeful and curious Performance*, above the Power of the *Critics*.

The ſame was anſwered by *Cheſterfieldienſis*, Mr. *Chr. Maſon*, and ſome others.

VIII. QUESTION 169, *anſwered by Mr.* Huntley.

PUT $4a = 14$ Feet, the *Circumference* of the Tree at Bottom; $4x =$ *Cir.* in CG, the Place where it is to be ſawn aſunder, then is $2a + 2x =$ *Circ.* in the Middle between AE and CG.



Put alſo $4b = 2$ Feet; the *Circ.* at Top, $c = ,3183098$; then $4ac =$ the Diameter AE, $4bc =$ Diam. BE; and making $m = 24$ Feet, ſay, As $\overline{2ac - 2bc} : m :: \overline{2ac - 2cx} : \frac{\overline{a - x} \times m}{a - b} =$ DI.

And, *by the common Way of meaſuring*, $\overline{\frac{a + x}{2}}\Big|^{2} \times \frac{\overline{a - x} \times m}{a - b} = s = 96$; this Equation *modelled*, is $x^3 + ax^2 - a^2x = a^3 - \frac{\overline{a - b} \times s}{\frac{1}{4} m}$, and ſolv'd $x = 1,775$ Foot; whence the Length $\text{DI} = \frac{\overline{a - x} \times m}{a - b} = 13,8$ Feet, and $\text{IB} = 10,2$ Feet.

Now, put $d = ,079578$, then we ſhall have $\overline{4a}^{2} \times d + \overline{4x}^{2} \times d + \overline{\overline{4a^2} \times d \times \overline{4x^2} \times d}\Big|^{\frac{1}{2}}$, multiplied into $\frac{1}{3}\text{DI} = 126,67802$ Feet, the required true Solidity of the *greater* FRUSTUM, inſtead of 96 Feet, by common Meaſuring.

And $\overline{4b}^{2} \times d + \overline{4x}^{1} \times d + \overline{4b^2 \times d \times 4x^2 \times d}\Big|^{\frac{1}{2}}$, multiplied by $\frac{1}{3}$ IF $= 18,60226$ Feet, the required *Solidity* of the *ſmaller* FRUSTUM. Q. E. I.

Mr. *Joſeph Wooſe*, and *Cheſterſieldienſis*, ſolved it in the ſame Method and Numbers; Mr. *Chr. Maſon*, Mr. *Chr. Green*, Mr. *John Buddle*, Mr. *Geo. Brown* of *Portſmouth*, and ſome others ſolved it.

Mr. Stapley, *the* Propoſer's Solution.

PUT $a = .75$, being half Diff. between the middle and bottom Girt, $b = 12$, being $\frac{1}{2}$ Length; $2c = 3.5$ the bottom Girt, and $d = 96$, the Feet ſolid, and $2x =$ the Length of the bottom Piece cut off; $2z =$ Girt in the Middle thereof; then $8xz^2 = d$, or $x = \frac{d}{8z^2}$. And $a : b :: c - z : x \because ax = bc - bz$; or $x = \frac{bc - bz}{a}$. Hence $\frac{d}{8z^2} = \frac{bc - bz}{a}$, and $8bcz^2 - 8bz^3 = ad$;

or $cz^2 - z^3 = \frac{ad}{8b} = .75$; ſolved $z = 1.32$, and $2z = 2.64$.

From above, $x = 6.8875$, and $2x = 13{,}775$, *nearly*. Now $24 - 13.775 = 10.225$ Feet, the Length of the *Top-Part* to be cut off, required; whence, 18.7659 = *Solidity* of the *Top-Piece*, and 125.6975 the *Solidity* of the bottom Piece, nearly.

Mr. Alexander Rowe's *Solution.*

PUT x = Length of the Piece to be cut off, y for the *Girt* at the Section; then $24 - x$ will be the Length of the Reſidue; ∵ $\frac{1}{2}$ of $\overline{3.5 + y}$ = Girt in the Middle of the Remainder. And $\overline{1{,}75 \times .5y}|^2 \times 24 - x = 96$, *per Queſt.* which being ſolved (by the Method of *Trial and Error)* $x = 1.75$ Feet *ferè*; and $y = .6543$, &c.

Now, put $a = 14$, *Circumf.* at greater End; $b = 2.6174$, nearly; *Circum.* at the Section; $d = .0795$; $f = 2$. *Circ.* at leſs End; then $bfdx = .72829$, the Solidity of *leſs Piece.* But, by the laſt *Proceſs*, the Content of the Whole is but $53\frac{1}{2}$ Feet, inſtead of 96. Hence it appears *how greatly erroneous the Method is of meaſuring by the Girt, eſpecially for very tapering Timber.*

Corol. That the *Solidity* of the two Pieces together, after being cut, ſhould ſo much exceed the Whole (as above) is *ſurprizing!* eſpecially as they were meaſured by one and the ſame *Rule!* Therefore it may be juſtly inferred, that the common *Rule* is not adapted to Truth. Hence we ought to ſeek ſome *other Rule* that will better anſwer the *general* Purpoſe of the Public, and as ſuch this RULE offers.

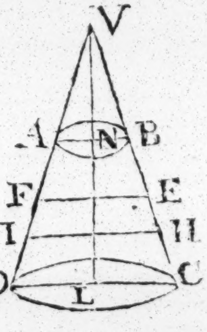
Find the Solidity of the Whole, or of either Piece, according to the Girt and alſo by the foregoing Method; then take a geometrical Mean *between both Solidities ſo found, which will be the proper ſolid Content, very near.*

☞ Alas! An Endeavour to alter the preſent general Practice of meaſuring Timber — how vain! while the Timber Meaſurers and Dealers find ſuch Account in the Corruption!

The *Fee*, to the Meaſurer and Judge of Quality, will make more or leſs Timber; bad Timber good; good, ordinary, and bad, worſe.

Mr. George Brown *of* Portſmouth's *Solution.*

LET ABCD repreſent the given Piece of round Timber; *Circumf.* at AB = 2 Feet, = a; Circumference at DC =14 Feet = b; Length NL = 24 Feet = p; =16; NO = x. Then will VN = 4 Ft. $= f$; ∵ $\frac{a}{f} \times \overline{f + x}$ = Circumf. at EF, and $\frac{sf + ax}{2f}$ = *Circ.* at HI, its Girt, = $\frac{sf + ax}{8f}$; and, *per Queſt.* $\overline{\frac{sf + ax}{64ff}}|^2 \times p - x = D$



$\frac{s^2 p}{64}$;

Or, $\overline{\overline{sf+ax}}|^{2}\,\overline{xp-x} = s^2pf^2$; then $x^2 + \frac{2sf-p}{a}$

$x = \frac{2sfpa - s^2p^2}{aa}$;whence,$x = \frac{\sqrt{4sfpa + p^2a^2} + pa - 2}{2a}$

$= 10.199337$ Feet, the required Length of the Piece to be cut o from the Top; from whence the Solidity of *greater Fruſtum* may b found $= 126{,}678$ Feet; and the Solidity of the leſs *Fruſtum*, 18,60 Feet, Q. E. I.

Remark. If the Length of the Piece cut off from the Top, be re- quired, when the Solidity of the remaining Piece ſhall meaſure th moſt; then will $\overline{p-x} \times \overline{sf+ax}|^{2}$ be a *Maximum.* In Fluxio and reduced, $x = \frac{2ap - sf}{3a} = 5\frac{1}{3}$ Feet, the Length of the up Piece cut off, when the lower Piece remaining, meaſures the m in ſolid Content.

IX. QUESTION 170, *anſwered by Mr.* Alexander Rowe.

The *Turkiſh Hegira*, or Flight of *Mahomet* (*Mahommed* among t *Turks*) is in the Year of the *Julian* Period, 5336 (and not 5 as in the New Dictionary of Arts and Sciences, under the W *Epocha*, 1ſt Edition) anſwering to the Year 622. And ſince the *Jul* Style begun in the 45 Year current before *Chriſt*; therefore 622 + $= 667$ current, the Year of *Julian* Style, when that *Hegira* bega which added to $1126 = 1793 =$ Year required.

The Reſt I leave to more minute Enquirers.

The ſame anſwered by Cheſterfieldienſis.

THE *Turks* and *Arabs* make uſe of the *Lunar* Year, of 354^d $48^m\ 36^s$; and the Obſervers of the *Julian* Style uſe the *Solar* Y of $365^d\ 5^h\ 48^m\ 57^s$; whoſe Difference being $10^d\ 21^h\ 0^m$ cauſes the *Arabic* or *Turkiſh* Year to change their Seaſons forw ſo that in the Space of 32 Years and a little more, they make Revolution through the Days of the Year.

The *Turkiſh Hegira* commenced 16th *July*, in the Year curr ſince *Chriſt* 622; whence we have 1126 Years of the *Hegira*, find the Year of *Chriſt* correſpondent—Thus:

As $364^d\ 48^m\ 36^s : 1126$ Yrs :: $365^d\ 5^h\ 48^m\ 57^s : 1092$ Yrs 2 *Julian* Style; to which adding 42 Days, anſwering to the 12th D of the 2d Month, *Saphar*, and we ſhall have 1092 Yrs 214^d—He

Days July Aug. Sept. Oct. Nov. Dec. Jan. D.
214 — 15 — 31 — 30 — 31 — 30 — 31 — 31 = 15 Fe

The *Turkiſh Hegira* began 622 Yr. before *Chriſt*.
To which adding 1092 correſponding to Yr. given, O
——
1714 The Year of Chriſt, O.S. requi
To which adding 4713 Yr. *Jul.* Per. 1 Yr. bef. *C*
——
6427 Yr. *Julian* Period, *February*
being on a *Monday*, O.S. Q.

☞ We refer the Reader to our *Royal Aſtronomer*, where he find the accurate Method of Solution.

X. QUESTION 171, *anſwered by* Cheſterfieldienſis:

PUT $c = 6\frac{6}{7}$; $n = 23\frac{7}{9}$; $s = 88$; and let a = *Huſband's*
ge, and e = Wife's Age; then, *per Queſtion*.

$+e=s$ (alſo putting $z = 1758$) $\frac{z-e}{a} = e + c$, and $\frac{z-a}{e}$
$= a + n$; Hence, $z = ae + ac + e = ae + ne + a$; and hence al-
$a = \frac{ne-e}{c-1} = s - e$; hence alſo, $e = \frac{sc-s}{n+c-2} = 18$ *Years*,
d $a = \frac{sn-s}{n+c-2} = 70$ Years.

Solv'd by Mr. Geo. Brown, *of* Portſmouth *Common.*

PUT $a = 88$, $b = 6\frac{6}{7}$, $c = 23\frac{7}{9}$, x = *Wife's* Age, y = *Huſ-*
d's Age, v = Year in which the *Huſband* was born. Then, *per*
eſtion, $x + y = a$; $\frac{v+y-x}{y} = b + x$; and $\frac{v}{x} = c + y$; Then
ll $v = yx + cx = by + yx + x - y$, and $\overline{b-1} \times y = \overline{c-1}$
x; from 1ſt Equation $y = a - x$, which being ſubſtituted in the
Equation, &c. $x = \frac{b-1 \times a}{b+c-2} = 18$ Years, the Wife's Age;
hence 70 Years = *Huſband's* Age, in 1759.

OLD and grey-headed, and full ſlow beſide,
What can he do with ſuch a youthful Bride?

Mr. Charles Green's *Anſwer.*

PUT a, b, and c, for 88, $6\frac{6}{7}$, and $23\frac{7}{9}$, *reſpectively*; x = *Huſ-*
d's Age; z = Date when the Queſtion was propoſed; Then, *per*
eſtion, $\frac{z+x-a}{x} = a + b - x$; and $\frac{z-x}{a-x} = x + c$;
ich Equations being reduced and ſolved, $x = 70$ = *Huſband's*
; and 18 = *Wife's* Age, required.

Mr. *Joſ. Wooſe*, Mr. *Huntley*, Mr. *Stapley*, the *Propoſer*, Mr. *Geo.*
is, of *Reedneſs* School, and others ſolved it.

Mr. Stapley's *Anſwer.*

PUT $a = 1758$ the Date of the Year when the Queſtion was aſk-
; $b = 6.888$; $c = 23{,}777$, and $d = 88$; z = Wife's Age,
= Huſband's Age; Then $x + z = d$, $\frac{a-z}{x} = z + b$; and
$\frac{-x}{z} = x + c$, *per* Queſtion; Hence, $\frac{a-z}{z+b} = x$, $\frac{a-x}{x+c} =$
and $\frac{a-x}{x+c} + x = d$; or $x^2 - x - dx + cx = dc - a$ (put
$= -1 - d + c = -65.223$) and we have, by compleating
□, $x = \sqrt{dc - a + m^2} : + m = 70$, the Huſband's Age,
18 the Wife's Age, *required*.

XI. QUESTION 172, *anſwered by Mr.* Joſ. Wooſe, *of* Scarboro

PUT $x =$ Widow's Share, then $2x =$ each of the two Dau ters Shares, and $6x =$ each of the 3 Sons Fortune.

Then, by *Queſt.* $18x + 4x + x = 10000$.£.

	l.	s.	d.
Whence $x =$ *Widow's* Share . . .	434	15	7
Each Daughter's Fortune	869	11	3
——————— . . .	869	11	3
Each Son's Fortune	2608	13	10
———————	2608	13	10
———————	2608	13	10
Sum £.	10000	0	0

The ſame was anſwered by Mr. *George Stapley*, Mr. *Chr. M* Mr. *John Metcalf*, Mr. *Charles Green*, Mr. *John Buddle*, Mr. G *Hicks*, of *Reedneſs* Free-School, Mr. *Compoſt*, of *Epſom*, *Cheſterfiel ſis*, Mr. *Tho. Huntley*, in *Latin* Diction; Mr. *Alexander Rowe*, an great many *others*.

XII. QUESTION 173, *anſwered by* Cheſterfieldienſis.

THE *leaſt* common *Multiple* of the Numerators of the given Fra tions, $\frac{3}{8}$, $\frac{5}{14}$, $\frac{7}{20}$, is $105 = 3 \times 5 \times 7$, being all *prime* Numbe Put a for the firſt No. e for the 2d, and y for the 3d. Then,

Queſtion, $\frac{3a}{8} = 105$; $\frac{5e}{14} = 105$, and $\frac{7y}{20} = 105$; Hence, $a =$

$e = 294$, and $y = 300$, the three *leaſt* Numbers anſwering the C ditions of the Queſtion, *required.*

The ſame anſwered by Mr. Geo. Brown, *of* Portſmouth-*Common*.

By *Queſtion*, $\frac{8v}{3}$, $\frac{14v}{5}$, and $\frac{20v}{7}$, are the three leaſt wh Numbers, *to determine the Value of* v? 'Tis evident that $\frac{8v}{3} =$

$2v + \frac{2v}{3}$; or $\frac{v}{3}$ is a *whole* No. Let $\frac{v-3}{3} = m \because v = 3m + 3$

which ſubſtitute in 2d. *whole* Number, it becomes, $\frac{42m + 42}{5} =$

$8m + 8 + \frac{2m+2}{5}$ or $\frac{m+1}{5}$ is a *whole* No. Let $\frac{m-4}{5} =$

$\because m = 5n + 4$; whence $v = 15n + 15$, which ſubſtituted in the

3d *whole* No. it becomes $\frac{300n + 300}{7} = 42n + 42 + \frac{6n+6}{7}$ or

$\frac{n+1}{7}$ is a *whole* Number. Let $\frac{n-6}{7} = p$; $\because n = 7p + 6$,

whence $v = 105p + 105$, a *General Value* of v. By Queſtion, th *whole* Numbers muſt be the *leaſt*; therefore v muſt be ſo, and $p = 0$; *whence* $v = 105$; and 280, 294, and 300 come out the three leaſt *whole* Numbers, required.

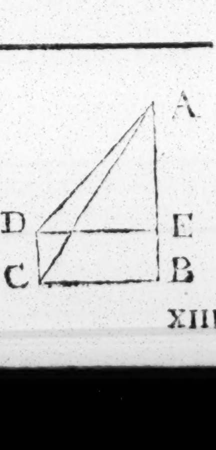
Inveſtigatio a Dom. *Huntleio.*

SCRIBATUR v *vice Numeri* primi, x *vice* ſecundi, *et* z Tertii; *in,* $\frac{3v}{8} = \frac{5x}{14} = \frac{7z}{20}$ *per* data; *multiplicetur* Pars prima *per* 14, *et* *ecunda per* 8; *quo facto nanciſcimur hancce* $42v = 40x$; ∵ $v : z :: 20 : 21$. *Multiplicetur autem Pars* ſecunda *per Numerum* 20, *et* tertia *per* 14, *ditque* $100x = 98z$, ∵ *Diviſione prius per* 2, *factâ*, $x : z :: 49 : 50$. *Fiat nunc hæcce* Proportio, $49 : 21 :: 50 . 21\frac{21}{49}$, *et liquet* v, x, z, *eandem ad ſe invicem tenere* Rationem, *quam* 20, 21, *et* $21\frac{21}{49}$: *duc* $\frac{21}{49}$, *in* Valorem minimum, *et fiet* $\frac{3}{7}$; *numeris porro* 20, 21, $21\frac{3}{7}$ 7 *multiplicatis, quo fractæ Partes tolluntur, obtinemus* $v = 140$, $x = 147$, *et* $z = 150$. Q. E. I.

Mr. Chr. Maſon anſwered in the ſame Numbers; as did Mr. *John* *ddle*, Mr. *Alexander Rowe*, and ſome others. — Mr. *Rowe* judi*ſly* diſtinguiſhes between the *Reſult* of the Fractions taken of the whole Numbers being a Fraction, or whole Number. In the *ſe* of a Fraction reſulting, 140, 147, and 150 anſwers. But in Caſe of whole Numbers reſulting, 280, 294, and 300 are the Numbers that can anſwer.

Barak (or *Balak*) *Longmate*, of *Portland-ſtreet, Soho, London*, (fol- this Queſtion † in p. 377. *Imp. Magaz.* for *July*, 1760, giving DAC there = 26′ inſtead of 39′ 38″ 38,44‴, and the *Caſtle's* 220.4, and *River's Breadth* 333.8; inſtead of 221.7096 and 9337) has given 420, 400, and 671 for the *leaſt Numbers*. — Who would ſend *Science* to an *Imperial Magazine* to be ignorantly *icized* and miſrepreſented by *Imperial Magaziners*, humbly con- *ing* (without Knowledge and Judgment) and bringing forth *r*; and denying it when *told of it*; and inſiſting on it's *Correction* Error (See *p.* 436. *Imp. Mag. for Aug.* 1760.) The *Palla- Author*, for this Behaviour, and his Correſpondents, have *ed* to have no more to do with *Imperial Magazines*, one Way *other*.

Required AB, *a* Caſtle's *Height, and* CB, *ver's Breadth? when the Diſtance* CA *from River's Side to the Top of the Caſtle is* 400 *the Height of an Obſerver's Eye,* = 5 Feet 6 *Inches; when he takes an Angle equal to* 33 *Degrees.*



XIII. QUESTION 174, *anſwered by the* AUTHOR.

IN a given Latitude, at a given Time of the Year, when the Sun obſerved at different Times, by the Clock or Watch, to have equal Alti in the Fore and afternoon, the Time by that Clock or Watch, when the paſſes the Meridian *is found as follows.*

Put L = the Place's *Latitude*, where the Obſervation was made,
D = the Sun's Diſt. from the Pole, at Noon.
T = $\frac{1}{2}$ Time *(t)* between the Obſervations, in Degrees.
V = $\frac{1}{2}$ Variation of the Sun's Decl. in that Time =
Seconds of Time.
M = Midd. Time between the *Obſervations*, or $\frac{1}{2}$ *t* added
Time of the Forenoon Obſervation.

Let $\frac{s'T \times t'L.}{r} = t.A$ like T; and B = D ∽ A.

Then $\frac{s.B \times t'T}{s.A \times s.D} \times V = N$, the *Number* of Seconds, or *Int* between M and the *true* Time of Noon.

And, $M \pm N$ = Time by that *Clock* or *Watch*, when the *Sun* on the Meridian; being in $\left\{\begin{array}{c}\textit{deſcending}\\ \textit{aſcending}\end{array}\right\}$ Signs.

WHENCE the Sun paſſed the *Meridian*, at in Place where the Obſervations were made.

XIV. QUESTION 175, *anſwered by Mr.* Huntley, *of* Burford.

BY Caſe I. *plain* Sailing, ſay,

As Rad. : *Diſt. run* 1189, 2 *Miles* :: *S. Courſe* 27° 542,9655 *Departure.*

As Rad. : *Diſt. run* 1189,2 *Miles* :: *Coſ. Courſe* 27° 10′ : 10 *Dif. Lat.*

NOW ſay, as $\left.\begin{array}{c}12^\circ\ 8'\\ \times\\ 60\end{array}\right\}$: S. 90° :: 542,9655 : Coſ. 41° 46′ which aſſume = Lat. *of the Place ſailed from.*

Then, the Lat. *of the Place ſailed to* = 24° 8′ 10″.

$$\left.\begin{array}{l}\text{Put, } p = \text{T.}\,\tfrac{1}{2}\,\overline{90^\circ - 24^\circ\ 8'\ 10''};\\ \quad q = \text{T.}\,\tfrac{1}{2}\,90^\circ - 41^\circ 46'\ 10'';\end{array}\right\}\begin{array}{l}m = \text{T. } 51^\circ\ 38'\ 9''\\ \text{a conſt. Arc.}\\ t = \text{T. } 27^\circ\ 10'.\end{array}$$

Then, $\frac{\overline{p - q} \times t}{m} = 651,83$ *Diff. Long.*

Which ſubtracted from 728 gives 76,17 *Error Long. too little.*

Next *aſſume* the 1ſt *Lat.* 45°, *whence* the ſecond = 27° 22′ working as before, we have $\frac{\overline{p - q} \times t}{m} = 678',2845$, Diff. Lon

Whence 49,7155 = 2d. *Error Long. too little.*

Now, $\overline{45^\circ \times 76,7 - 41^\circ,76944 \times 49,7155} \div \overline{76,17 - 49}$ = 51,07119, or 51° 4′ 16″.

Aſſume this for the *true* Lat. and repeat the Operation, the *will be* 741,4; whence 13′,4 *Error of Longitude too much.*

Then, $\overline{51,07199 \times 49,7155 - 45^\circ\, 13'\, 4''} \div \overline{49,7155 + 13',4}$
$=49^\circ,78284$ or $49^\circ\, 46'\, 58''$.
Aſſume this for the true Lat. and repeat the Operation, and it will ive the *Error* 1',68 *too little.*

Laſtly, $\overline{51,072 \times 1,68} + \overline{49,78 \times 13,4} \div \overline{13,4 + 1,68} = 40,92$
r $49^\circ\, 55'\, 12''$ Lat. of the Places the *Ship ſailed from* ; $- 17^\circ\, 38' =$
$2^\circ\, 17'\, 12''$ Lat. the *Ship arrived at*. W. W. R.

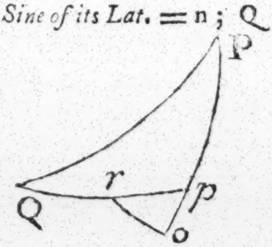
The ſame anſwered by Mr. Alexander Rowe.

As S. *Courſe* 27° 10' : *Diff. Long.* 728' :: *Coſ. Courſe* 62° 50' : erid. *Diff. Lat.* 1418',5 Miles.

Again, As *Rad.* : *Diſt.* 1189',2 :: *Coſine Courſe* 62° 50' : *Diff.* at. 1058' = 17° 38'.
Whence, by aſſuming the greater Latitude, (the leſs Latitude following) and taking out the meridional Dif. of Latitudes, till = 1418, he *Latitudes* of the *Places* are 49° 55' N. ſailed from.
32 17 N. arrived in. W. W. R.

☞ *Mr.* Rowe's *is a very eaſy Method by the Reſult of two Proporins, and a Table of meridional Parts.*

Mr. *George Brown*, of *Portſmouth* Common, has deduced his Aner as follows (*contrary to what he may ſee done by* W. Jones, *Eſq*; *in* . II. *before* Gardiner's *Log.*) 50° 14' 33" 20''' Lat. ſailed from.
And 32 36 31 54 Lat. arrived in.



LET P *repreſent the Place ſailed from* ; *the Sine of its Lat.* = n ; Q e *Place arrived at, the Sine of its Lat.* = r ; d the Loxodromic *Curve* prQ = *the Diſtance* iled ; *and the* ∠ opr *the* Ship's Courſe : hen by an eaſy Proceſs, (which Mr. *Brown* nceals from Examination, as before did r. *Rebus* or *Rubes*, in his improper Anſwer, all. 1759, to his *inconſiſtently propoſed* Queſon X. and 140 Pall. 1758, rectified in p. 80 all. 1760)

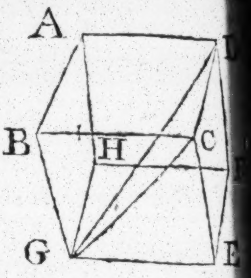
$$r = n - 1058.01003543 \text{ and } .3584175 = \text{Log.}\,\frac{1+n}{1-n} - \text{Log.}\,\frac{1+r}{1-r},$$

from which *Equations* and the Method of *Trial and rror*, (notwithſtanding *New Diſcoveries*) allowing 60 Miles to a egree of Latitude, $n = 50^\circ\, 14'\, 33''\, 20'''$ N, and $r = 32^\circ\, 36'\, 31''\, 54'''$, N. as aforeſaid) the required Latitudes.

☞ *THIS Gentleman obſerves that if the Latitudes be found by* plain nd Mercator *Sailing, they will come out much greater than the above, hough not ſo true.*

QUERE, whether then the *Principles* of *Mercator* and plain Sailng are erroneous, that Mr. *Emerſon* has demonſtrated to be true, in is Book of Navigation.

XV. QUESTION 176, *anſwered by Mr.* Geo. Brown, Mathemat
Maſter, at Portſmouth *Common.*



PUT AD = GE = 8 Feet = a; the longeſt ſtrait Rod GD
10 Feet = b; GC = x? Then *per* 47. E. 1. the Height CD = $\sqrt{b^2-xx}$, and CE = $\sqrt{x^2-a^2}$; the Solidity of the Ciſtern ADFHGBCE = $a\sqrt{\overline{b^2-x^2}\times\overline{x^2-a^2}}$; which per Queſtion muſt be a *Maximum*, or $\overline{b^2-x^2}\times\overline{x^2-a^2}$ will be a *Maximum.* Put into Fluxions, and reduced $x=\sqrt{\frac{b^2+a^2}{2}}$; conſequently the Depth is = the Breadth

$$\sqrt{\frac{b^2-a^2}{2}}=4.2426406 \text{ Feet.}$$

To find the Time of emptying, being full of Water, through the given
cular Hole at the Bottom, of 2 Inches Diameter.

PUT BG = GH = m, $d=\frac{1}{6}$, $c=16\frac{1}{12}$ *Feet*, $n=.7853$

Then per *Emerſon's Mechanics*, and Fluxions, we have $\frac{am\sqrt{2c}}{ncd^2}$ $=1130.014509$ Sec. $=18^m\ 50^s\ 0^{th}\ 52^{fo.}$ *&c.* the true Time
which all the Water will run out of the *Ciſtern.* Q. E. I.

The ſame anſwered by the Propoſer, Mr. Paul Sharp.

PUT $a=8$, $b=10$, and $x=$ Breadth, then $\sqrt{\overline{b^2-a^2}-x^2}$ Depth; and $ax\sqrt{\overline{b^2-a^2}-x^2}=$ Solidity, a *Maximum*, per *Quæſ.* $2a^2b^2x\dot{x}-2a^4x\dot{x}-4a^2x^3\dot{x}=0$, by Fluxions. Whence, x^2 $\frac{b^2-a^2}{2}$, and $x=\frac{6}{\sqrt{2}}=4.24265$. Hence the Breadth
Depth are *equal*; and the Solidity = 144 ſolid Feet, which put = A
S = $16\frac{1}{12}$ Feet, D = 4.24265; and the Area of the *circular Hole*
F = ,001818 Feet; $y=$ *Seconds* of Time ſought, in which 144 ſol
Feet of Water will *evacuate.*

BY p. 173 *Emerſon*'s Mechanics, $Fy\sqrt{2DS}=A$. ∵ y $\frac{A}{F\sqrt{2DS}}=565.03825$ Sec. $=9^m.4173$, which doubled
18.8346 Minutes of Time, *required.*

Cheſterfieldienſis and Mr. *John Buddle* ſolved it elegantly and
curately; as alſo did Mr. *Woofe*, and ſome others.

XVI. QUESTION 177, *anſwered by Mr.* Joſ. Woofe, *at* Scarborou

PUT $x=\frac{1}{2}$ Sum of Guineas and Shillings, and $y=\frac{1}{2}$ th
Difference.

Then $x+y=$ No. *Shillings*; and $x-y=$ the No. *Guineas*;

r Queſt.	1	$6x^2y + 2y^3 = \overline{45} \times \overline{x^2 - y^2} + 27$
	2	$4xy = 24x$
reduced	3	$x = 6$
btract g ich Va- in 1ſt.	4	$36x^2 + 432 = \overline{45} \times \overline{x^2 - 36} + 27$
educed d root racted.	5	$x = 15$; Hence $x + y = 21$ the No. of Shil. $x - y = 9$ the No. of Guin. } = 10 Guin.

W. W. R.

Cheſterfieldienſis and Mr. *John Buddle* ſolved it in the very ſame ethod and Numbers, as did Mr. *Geo. Stapley.*

Mr. Geo. Brown, *of* Portſmouth Common, *ſolves it thus.*

PUT x = No. *Guineas*, y = the *Shillings*; then $y^3 - x^3 =$ $y + 27$, and $y^2 - x^2 = 12 \times \overline{y - x}$, *per Queſt.* From the Equation, $y = a + x$, which ſubſtituted in 1ſt Equation, we $x^2 + 12x = 189$ ∵ $x = 9$ *Guineas*, and $y = 21$ Shillings, and *Debt* due to *Analyticus* is 10 Guineas. Q. E. I.

Mr. Tho. Huntley, and Mr. *Alexander Rowe*, ſolved it as above.

II. QUESTION 178, *anſwered by Mr.* Geo. Brown, *of* Portſmouth Common.

UT $p = 3.14159265$; d = Diameter of the inſcribed Circle; *Abſciſſa*, y = *Semiordinate*, and p = *Parameter* of the circum- ing common *Parabola*.

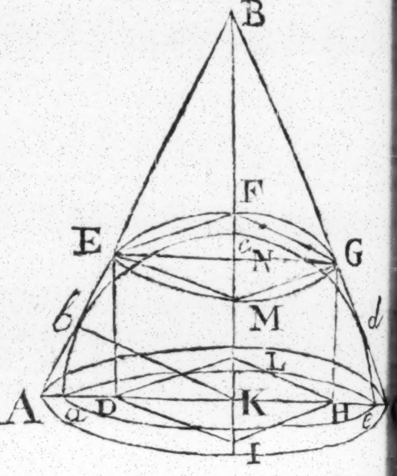
HEN will $2y - p = d$, or $2y - \frac{y^2}{x} = d$; and $\frac{4}{3}xy$ = Area of *arabola*, which per *Queſt.* muſt be a *Minimum*, or $\frac{y^3}{2y - d}$ a *Mi-* . Put into Fluxions, $y = \frac{3}{4}d$; $x = \frac{9}{8}d$, and $p = \frac{1}{2}d$; Then $\frac{3d\sqrt{10}}{4} + \overline{\frac{d}{4} \times \text{Hyp. Log. } \overline{3 + \sqrt{10}}}$ = Length of the whole lic Curve; and pd = Circum. of the inſcribed Circle; there- $\overline{xp - \frac{3\sqrt{10}}{4}, -\frac{1}{4} \times \text{Hyp. Log.}\,\overline{3 + \sqrt{10}}} = \cdot 3152735d =$ 47p by Subſtitution; the *required Demonſtration*?

Propoſer, Mr. *Paul Sharp*, of *Biddenden, Kent*, gave an *ele-* *Demonſtration*, by another Method; who concludes with this ary.

1 : 1,125 :: *the Square of the Diameter of any Circle : to the the leaſt circumſcribing common* Parabola.

XVIII. QUESTION 179, *anſwered by Mr.* Geo. Brown, *of* P
mouth Common.

LET *abcde*K repreſent the *greateſt* inſcribed Hemiſphere ; and D MIHL the greateſt inſcribed Cube.

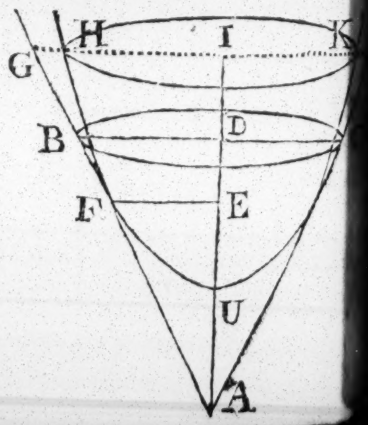


Put BK = 50 *Inches* $= a$; $p = ,5236$; $z =$ Side of the Cube EF = GH. Then, *per* 47 E. 1, $NE = \frac{z}{\sqrt{2}}$ and $NB = a - z$, *per Sim.* $\triangle$s, NB : NE :: BK : KA $= \frac{az}{\overline{a-z}\sqrt{2}}$; and *per* 47. *e.* 1. $AB = \frac{a}{a-z}\sqrt{\frac{2aa-4az+3z^2}{2}}$, then *per Sim.* $\triangle$s, AB : AK :: BK : K*b* $= \frac{az}{\sqrt{2a^2-4az+}}$ = Radius of the inſcribed *Cube* ;

Therefore, $\frac{4pa^3z^3}{\overline{2a^2-4az+3z^2}|^{\frac{3}{2}}} - z^3 = 1155$ cubic *Inches* i Wine Gallons, *per* Queſtion.—Which *Equation* put into Numbe ſolved, $z = 12.38789$ Inches, the ſide of the greateſt inſcribed C therefore the Radius of the greateſt inſcribed Hemiſphere is = 11.3 Inches, the Dimenſions *required.*

The *indefatigable Cheſterfieldienſis* determines the Side of the gr *inſcribed Cube* = 7,202 Inches, and the Diameter of the greateſt in bed Hemiſpheres = 18,005 Inches, which we leave to be exam

XIX. QUESTION 180, *anſwered by Mr.* George Brown, *of* P
mouth Common.



IT is evident that the longer the Spheroid, *the higher will the Water be raiſed in the Glaſs by it's* Immerſion. *And when the Spheroid's Height is infinite, then will the Water be raiſed to the greateſt Height poſſible, and the* Spheroid *will then become a* parabolic Conoid.

PUT $p = .78539816$; BC = 5 Inches, $= 2a$; AD = 7 Inches $= b$; AI $= x$, the Height of the Water by Immerſion of the *Conoid.*

vE

v; Then $b : a :: 2v : EF = \frac{2av}{b}$, and per Property of the Curve

$\overline{EF}^2 :: v1 : \overline{IH}^2 = \frac{4a^2v}{b^2} \times \overline{x-v}$; and the Solidity of the

fed Segment vHK is $= \frac{8pa^2}{b^2} \times v \times \overline{x-v}|^2$, and the So-

f the Water is $= \frac{8pa^2b}{15}$. Again, $b^3 : \frac{4pa^2b}{3} :: x^3$:

$=$ Solidity of the Cone AGL; Therefore $\frac{8pa^2}{b^2} \times v \times \overline{x-v}|^2$

$\frac{a^2b}{15} = \frac{4pa^2x^3}{3b^2}$, or $\frac{2}{b} \times \overline{v \times \overline{x-v}|^2} + \frac{2b}{15} = \frac{x^3}{3b^2}$ which

tion, muſt be a *maximum*, or $v \times \overline{x-v}|^2$ a *maximum*. Put

xions and reduced $v = \frac{x}{3}$; and by Subſtitution in the above

$x^3 = \frac{18}{5}b^3$; $\because x = b \times \overline{3.6}|^{\frac{1}{3}} = 10.728333$ Inches,

pendicular Height of the Water, if the Sides of the Glaſs be d high enough; and the Solidity of the *immerſed* Segment

$= \frac{64pa^2b}{15} = 146.6076565$ Solid Inches.

The Solidity of the immerſed Segment is equal to eight Times the *of the Water*. Q. E. I.

rfieldienſis makes the Solidity of the *immerſed* Segment equal to Inches, which we leave to be examined—as Mr. *Geo. Brown* s an Augmentation of the Glaſs; for we would not ſtop any to Truth, wherever it lies.

XX. QUESTION 181, *anſwered by the* AUTHOR.

$y = l.x$, then $\overline{y}|^y$ muſt be a *Minimum*, per Queſtion; or will be a *Minimum*. In Fluxions $\dot{y} \times l.y + \dot{y} = 0$. whence 1 the Hyperbolic Logarithm. Let $M = 0{,}43429448$ *&c.* M × Hyp. Log. $- 1 = -0{,}43429448 = \overline{1}.56570552 =$ 0552, will be the correſponding *tabular* Logarithm; whoſe Number (correſponding alſo with the *Hyp. Log.* $- 1$) $=$ 94, *&c.* $= y = l.x$. And $\overline{.3678794}^{.3678794} = y^y =$

$= {,}6922008$, *&c.* the *Minimum*.

c, if $.3678794 =$ Hyp. $l.x$. then $M \times .3678794 =$ 681, the correſponding *tabular* Log. whoſe Natural Number 4668 $= x$, *required*.

Mr. *Geo. Brown*, of *Portſmouth-Common*, and Mr. *Edward* *ſon*, of *Hull*, truly ſolved Part of the foregoing Queſtion.

☞ *If in* $\overline{l.x}|^{l.x}$, *l.x had been conſidered as the common or* Log. *of* x, = .3678794 ; *then its* Natural *Number correſpondi* *been* = 2.33281.

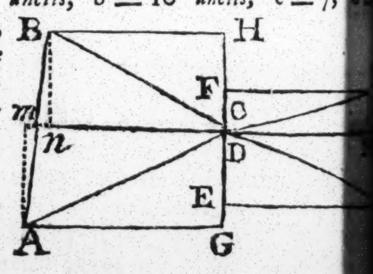
But leſt we ſhould *be thought* miſtaken in the foregoing Solut When Mr. *Brown* had found $y = .3678798$, he ſuppoſes $x \times \overline{\text{Hyp}}$ = .3678798, (not the Quæſt.) and finds thence $x = 1.32110$ quired, he ſays.—Mr. *Ed. Johnſon* puts $z = l.x$, and L = Hy *l.x* ; then per Queſt. L. *z* muſt be a *Minimum*. Which p Fluxions, $\dot{L}z + L\dot{z} = 0$; in which ſubſtituting $\frac{\dot{z}}{z}$ for $\dot{L}$, + $L\dot{z} = 0$, ∵ L = − 1 ; whence $l.x = z = 0{,}367879$*

Next (he ſays) *to find a Number, which being multiplied by* *ſhall produce* 0,367879; which was not the Quæſtion ? He d nes, by Trials, $x = 1{,}663816$. W.

We are ſorry for the *News*, by Mr. *Edward Johnſon*, of the as we underſtand, of Mr. *Rob. Fearnſide*, of *Hull* ; who was of admirable *Genius* and Capacity ; as many of his public Prod teſtify.

Inveſtigatio PALMÆ PROBLEMATIS, *a Dom. Thom. Hunt*

1. PONAMUS a = 8 *unciis*, b = 10 *unciis*, c = 7, x = *Celeritati* Globi A, s = 335 *Pedibus, eritque* s − x = *celeritati Globi alterius* B, *dein hæc naſcitur Proportio*, $a \times x : \overline{s - x} \times b :: c : d$ ∴ $x = \frac{bcs}{ad + bc} = 175$, *et* $s - x = 160$.



2. *Ducatur* AB = 150 = h, AD = 175 = p, BD = 1 *deinde (poſito* r = *Radio) ex* Theoremate Trigonometrico $\angle B = \overline{h^2 + q^2 - p^2} \times r \div 2hq = {,}3640625 =$ *Coſ.* *unde* ∠ BAD = 58° 22′ 47″ *et* ∠ ADB = 52° 58′ 13″.

3. *Pone* m = S. 68° 39′, n = *Coſ.* 68° 39′, h, q, *et* r *tum* $\frac{1}{2}h \times m \div \overline{qr - \frac{1}{2}hn} = {,}5264164 =$ T. 27° 45′ 47″ BD*m*, *unde* ∠ AD*n* = 25° 12′ 26″, *et* Perpendicula Am, 74,53133, 74,53058, *qui numeri exprimunt Velocitates quibus* *ſe mutuo incurrunt*. *Fiat nunc* e = Am + Bn = GH = 14 a *et* b *ut ſupra*, z = *diſt. communis Centri Gravitatis a* Glob $z = ae \div \overline{a + b} = 66{,}24974 =$ HG, *et* GC = 82,81217

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* Hence the Natural Number whoſe Hyp. Log. = 0,36 .x muſt = x = 1,444668 required, as before.

Fiat nunc $a = 4$ *oz.* $f = 74,53133$, $b = 5$ *oz.* $g = 74,53058$, $y =$ *Velocitati* Globi A *poſt impulſum, et Velocitas* B *erit* $f + g - y$; *entum* A *erit* ay, *et Momentum* B, $bf + bg - by$, *ſumma Momen-* $bf + bg - by - ay = af - by$, *Summæ Motuum eandem verſus am ante impactum, quæ quidem Summæ ſemper eædem manent, ſicut hyſicis demonſtratur : Quare* $-y = \frac{af - bf - 2bg}{a + b} = -91,09301$:

liquet Motum eſſe contrarium prioris, et $f + g - y$, *ſeu Velocitas* B $57,9689$; *ſi modo Vires, elaſtica nempe et compreſſiva, æquales ſint.*

Nunc ſcrutemur effecta quæ ab his Viribus inæqualibus oriuntur:

$= 16$, $b = 9$, *et dic,* $k : l :: \overline{e - z} : \frac{\overline{e - z} \times l}{k}$, *et* k

$:: z : \frac{lz}{k}$; *jam* $\overline{e - z} - \frac{\overline{e - z} \times l}{k}$ *et* $z - \frac{l^2}{k}$ *ſunt quan-* *Celeritatum defectu Elaſticitatis deperditæ, quare* y *ſive* Celeritas

A erit $y + \frac{\overline{e - z} \times l - \overline{e - z} \times k}{k} = 55,13728$, *et celeritas*

$B = \overline{e - y} + \frac{lz - kz}{k} = 28,98464$.

c ut finem huic Operi imponamus, eſto,

S. 90 : 175 :: S. 64° 47′ 34″ = ∠ ADG.
: 158,335 = AG = Dm = DK = EM
S. 90° : 160 :: S. 62° 14′ 13″ = ∠ BDH,
: 141,5809 = BH = Dn = DN = FL
58,335 : T. 45° :: 55,13728 : T. 19° 11′ 59″ = ∠ EMD,
19° 11′ 59″ : 55,13728 :: S. 90° : 167,6608 = DM,
41,5809 : T. 45° :: 28,98464 : T. 11° 34′ 11″ = ∠ DLF,
11° 34′ 11″ : 28,98464 :: S. 90° : 144,5184 = DL.

Inveſtigatione *ſuperiori colligenda eſt hæcce* Concluſio.

ectio globi A *poſt impactionem format Angulum cum Plano tangente* = 19° 11′ 59″, *et directio* Globi B *cum eodem plano Angulum* = 34′ 11″, *celeritates* Globorum A *et* B *ſunt ut* 167,6608 *et* 144,5184.

Q. E. I.

Mr. Tho. Huntley deſervedly claims the 12 Prize-*Palla-* without a Competitor.

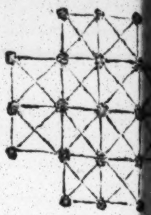
SWERS *to the* PARADOXES *in the* PALLADIUM *for* 1760.

I. Paradox, *anſwered by Mr.* John Thomas.

EDWELL gained 10 *Guineas*, and Hazard 10 *Shillings*; h have both the ſame *Cube-root* ; and the ſame with 10 Thou- Pounds. —*Barak* (or *Balak*) *Longmate*, of *Portland*-Street, *Soho*, ed on the Impoſſibility of an Anſwer.—Who is ſaid to be the *Pilot* Queſtions and Anſwers in the *Imp. Magazine* — We have ſome wonderful Productions, by Letter, to exhibit.

II. PARADOX, *anſwered by Mr.* Chriſ. Maſon, *of* Eaſtburn, *in* S

Ingenious Friend, what you requeſt I grant;
And when you pleaſe—command your *Slave* to
plant.



Mr. *Geo. Stapley*, the Propoſer, and ſome few others, anſwered this *Paradox*.

ANSWERS *to the* REBUSSES *in the* PALLADIUM, *for* 176

I. REBUS, *anſwered Rebuſmatically, by* Belinda.

TO *three Fifths* of a Man—not *very wiſe* ‖ born,
Join the End of a *River* * and Sound of a Horn. †

Silly ‖ Sil is 3 Fifths; *ver*, * the End of a River; *ton* †, Sound of a Horn—rebuſmatically compoſing *Silverton.*

II. REBUS, *anſwered by Mr.* John Knowles, *of* Foxton.

To pleaſure the Ladies this Anſwer I've ſent,
Northfleet is the Town in the County of *Kent.*

III. REBUS, *anſwered by Mr.* John Buddle.

A *Man* is the Sex, and 'tis *Woe* we diſdain;
But *Woman*'s the Object we ſeek to *obtain.*

ALL *anſwered in two Lines by Mr.* Chr. Maſon *of* Eaſtburn.

At Northfleet, *or* Sylverton, *let all be told it*;
When Woman'*s the Subject, who would but unfold it?*

Mr. *Cha. Green*, of *Denmark-ſtreet, Soho*, anſwered the ſecond third *Rebus*; whoſe *Merits* are more than we have, at preſent, Ro to expreſs.

Mr. *Swift*, of *Stow*, anſwered all the *Paradoxes* and *Rebuſ* Verſe; as did ſeveral others, whoſe Compoſitions we have not Ro to inſert.

To the PALLADIUM-AUTHOR.

—————— *Nec Lex eſt juſtior ulla*
Quam necis artifices arte perire ſuâ.

" SIR,

" I and ſome *Friends* (who uſed to buy the *Imperial Mag*
" have been *conſidering* what *Deſign* a certain Perſon (who, *a*
" anſwerable for what he publiſhes) could have in attackin
" of his Element, *publickly*, my Friend Mr. *G. B.* one of you
" reſpondents, for your *privately* communicating his *Correction*
" *rak*'s falſe Solution (p. 377. *Imp. Mag.* for *July*, 1760, if
" ſuch a Perſon) the Correction being *given* me from my *F*
" follows.

	BA = *Caſtle's Height*	CB = *River's Breadth*	∠C
" By *Barak*	220,4 *Feet* . . .	333.8 *Feet* . . .	26′
" *My Friend*	221,7096 . . .	332.9337 . . .	39′38″3

" THIS *Correction* was not only *refuſed* to be inſerted, (as
" in *Magazines* of Reputation) but repreſented as *Error*, fo

"of Judgment or a right Principle. And my *Friend* is further miſrepreſented, (p. 489 *Imp. Mag.* for *Sept.*) where but *Part* of the *Error*, charged againſt him, is acknowledged, as not *worth Animadverſion*; becauſe ('tis ſaid) the *falſe* Solution was derived from *true* Principles; being as *bad* as having *no Principles at all.* And while the *Miſrepreſenter* pleads, *to err is human*, and to *forgive* (his continued *Miſrepreſentation) divine*, he has thrown more *Offence* on the *Matter*; inſtead of making ſome ſuch *proper* Acknowledgment as follows; to deſerve being *excuſed* for his firſt *undeſigned* Offence; if that had been the Caſe.—

We are ſorry for our Miſtake and Miſrepreſentation of the Palladium-Correſpondent's Correction of our *Error, p.* 377. *which* Plea *of Error we* retract, *to eſtabliſh* Truth.

"Offences, *properly* acknowledged, every *honeſt* Mind, or *generous* Spirit, will freely excuſe. But continued Offence (ſee p. 436 and 489 *Imp. Mag.)* is *not divine*; but *againſt* right *Reaſon, Religion, Juſtice*, and the good of *Society*; requiring proper *Condeſcenſion* or *Acknowledgement* for Offence firſt given, or Meaſures to compel it, for reſtoring the Harmony and Happineſs that ſhould ſubſiſt in a *Community.*—Yet we *find* ſome Men, doing *Wrong*, will not own it; but, to *ſcreen* themſelves, would caſt the *Blame* on their Accuſers, or on thoſe to whom *Wrong* is done.

"It may be worth aſcertaining to the Public, the Utility of a *monthly Patent Collection*, containing the *Gleanings* of Knowledge? (by great Study, Labour, and Expence of learned Men employed, as is pretended, and yet by Maſters at School and other Country Contributors, *required* to *pay Poſtage.)* See a *quibbling Controverſy*, ſigned *C. Brent*, to the *Palladium-Author*, (p. 471. *Imp. Mag.* for *Sept.* 1760) where *Truth, Reaſon, Argument*, and every Thing ſerious or juſt are made *aſhamed:* requiring no Anſwer. See alſo ſuch like other monthly *Gems* of *Truth* and *Science*, pretended to come from Men of *Learning* and Judgment, as if no *leſs* than Rivalling the *Palladium-Author* and his *Correſpondents* were intended.

"I beg you will have no *public* Controverſy with the Publiſhers of Abſurdity; but *leave* it to your Correſpondents and Auxiliaries to do them *Juſtice*;—they are *beneath* your *Notice*, or *Animadverſion*. The Inſults offered you, in two *private Letters* communicated, ſufficiently *mark the Scribler* of a ſad *Scrawl*; by which, I ſee from the *laſt* Letter, (inſtead of doing *Juſtice* to your Correſpondent, on your Remonſtrances, the *mean Plebeian* (as he *ſtiles* himſelf in his *firſt* Letter) wants a *Handle* to take Advantage by *Law:* Who feigns *Pity* of himſelf, and of his *daily Bread*, to get off his *Offence*, of firſt beginning to expoſe my Friend in *public*. He did not mention his Name, 'tis true; but (perſonally) *pointed him out*.

"I cannot *forbear* obſerving that, in the *firſt* Letter, you communicated, 'tis ſaid, '*I ever acted uniformly*.' (ſo do thoſe acting uniformly *wrong)* ‘ *I have done that Juſtice by you, I* wiſh *you would meaſure to others*’—but don't ſay meaſure to *himſelf*—though *Somebody pleaded,* or play'd his Error on my *Friend,* who is your Correſpondent—and own'd it, at laſt, but in Part; adding his *Imperial Compliments.* 'Tis farther *ſaid* in the *firſt Letter,* ‘ *I will have no more Controverſy in the Magazine,*’ (yet ſince is publiſhed an *abſurd Controverſy,* ſigned **C.** *Brent.)*—Next is *ſaid,* after many humble Thanks and Cringes in public to mathematical Correſpondents and Maſters at School, ‘ *It is amazing to me, that two or thre mathematical* Rapſcallions (being a *Scots*-Term) *ſhall preſume t think their* Brigues (another *Scots*-Term—Quære Brogues) *an Animoſities can engage the Attention of* five *rational Beings in th* whole *Kingdom*’ — Which *you, H. M. Sadler, C. Brent,* and *Barak,* muſt divinely *forgive,* as private Affairs; being *exact* Juſtic done to YOURSELF for keeping ſuch *Company*; though you have a much *Right* to print the *Compliment,* as he aſſumed, who printe *angry Letter,* ſent him, detecting *Error.*

“ I dare ſay you have *no Deſign* againſt any *Plebeian*'s Propert and *daily Bread,* though you are ſo *abſurdly* accuſed, in that Reſpect, by Letter, to *ſcreen* the Offence given you.

“ YOUR Deſign in detecting *Error* and *Abſurdities,* is to *improv genuine Science*; and to aſſert *Britiſh* Liberty and *Property.* An certainly you have as much *Right* as *Critical* monthly *Reviewers* (always giving good Characters of Books that are their own Property) to criticiſe and demoliſh *bad* Productions: though, as I am told, a *monthly* Patent *Review* (not rightly *conceiv'd)* latel died, of itſelf, *abortive.*

⁂ *Some* Inſect Productions *that cannot be made the Subject of Obſervation, without being* magnified, *will ſoon die of themſelves, if neglected. And other* ſmall *Inſect* Productions, buzzing *and offerin their* Proboſces, *may deſerve a Flapper!* (as I have often told yo by Letter) *being of no long Continuance!*

“ I wiſh the *Palladium*-Correſpondents, in general, for the *Honou* of your WORK and of *genuine* and *ſelect Science,* would henceforth *reſolve,* as I have done, never to appear in any *Production,* aſperſing the *Palladium Author* and his *Correſpondents.* Who furniſhed *Magaziner* with his firſt 3 *Queſtions* and a *Quere,* and ſince wit other Materials at his humble Requeſt, by which he gained othe Mathematical Correſpondents, till his Inability in *Science,* bein out of his *Element,* was diſcovered. And I hereby recommend t you, Sir, the Palladium-Author, that you would *moſt* oblige thoſ Palladium Correſpondents who appear where it is *moſt* conſiſten with their true Reputation, and where their Science will *not b murdered,* for Want of Judgment.”

I am, Sir, your humble Servant,

Canterbury, Oct. 5th, 1760. SOCIUS.

“ *P. S.* If any Thing hereafter ſhall be unjuſtly offered in any *lo monthly Production, Reprizals* ſhould be made on the *Proprietor* thereof, who *alone* is anſwerable for what is therein publiſhed. It i amazing to me that a *Set* of Men ſhould *preſume* to publiſh *Aſperſi* an nd *Contempt*, in their *monthly Collections*, under the Name of *Controverſy*, or of what is *ſent them* for public *Utility*; yet deny allowing Room for Anſwer, except *when* and in what *Manner* they pleaſe: Or pretend *Damage* to their *Property*, if properly anſwered elſewhere. Whether ſuch Men are the *uprighteſt*, may be *neceſſary* to enquire and determine?

⁂ *We thank our worthy* Friend *for the above* Letter. *And that no* Perſons of Juſtice *may be offended at his Obſervations, we ſhall be ſo far from taking the Diſcovery of our Errors* amiſs, *publiſhed in any of our Productions, that we offer our Thanks to thoſe, who ſhall be pleaſed to obſerve them* properly *to us, that Truth (which is our principal View) may be promoted.*

Mr. SHORT, *our* CORRESPONDENT, *ſends us the following* eaſy RULES *for writing* LETTERS. Cambridge, Sept. 2, 1760.

1. To be as ſhort as poſſible; you are firſt to note the *feweſt* Number of *Heads* or *Subjects* required to be treated on; which are to follow in *Order*.

2. Never to *reaſon* upon any one Subject; but only juſt to mention what you *mean* or *intend* about it; becauſe reaſoning and being too particular, is ſhewing *Friendſhip* and *Condeſcenſion*.

3. Never to uſe a *long Word* when a *ſhort one* will do as well: For Inſtance; to uſe *Proof* for *Demonſtration*; *Change* for *Viciſſitude*; *Put off* for *Procraſtination*; *Letter* for *Epiſtle*; *Likeneſs* for *Similitude*; *Truth* for *Veracity*; *high* for *imperial*; *low* for *inferior*; *falſe* for *erroneous*, &c. And when long Words are allowed to fill up a Vacancy of Speech, to uſe thoſe which are moſt *familiar*. As *Conſideration* for *Animadverſion*; *Greatneſs of Mind* for *Magnanimity*; *Generoſity* for *Liberality*; *Impoſing* for *Exorbitancy*; *Over and above* for *Superabundant*; *Hindrance* for *Prevention*; *Kindneſs* for *Benevolence*; &c. always avoiding *hard* Words, *long* Words, and *Pedantry*, as much as poſſible, for *eaſy* and *clear* Expreſſion.

4. To uſe the *ſhorteſt* Sentences poſſible, that the *ſhorteſt* and moſt *familiar* Words can expreſs; *that is*, inſtead of ſaying, *I am extremely obliged to you for all the reiterated Obligations you have ſo beneficially conferred upon me*, &c. *I thank you for all Favours received*, &c.

5. When you would excuſe any *Fault*, or *Omiſſion*, you may ſhortly pretend, or inſinuate what is *plauſible*; but never to tell a *direct Lie*, underhand, for fear of being *found out*. As when you don't care to anſwer, or have neglected anſwering, a Letter for a While, you may pretend what you like beſt, that is plauſible. WIL. SHORT.

The humble PETITION of LEAST to LITTLE. *Humbly ſheweth*,

That your *Petitioner*, *Leaſt*, is in Danger of being ſuperſeded in his Promotion, by *Leſſeſt*, as *Leſs* has been ſuperſeded by *Leſſer*, for ſeveral Years laſt paſt; tho' it does *not appear* that ever the ſaid *Leſs* forfeited his Duty, ſo as to deſerve the ſaid *Leſſer* to be put over his *Head* — I the *Leaſt*, therefore, for my own Sake, and for my Uſe to the Public, do moſt humbly beſeech my Superior, *Little*, in the firſt Degree, that he would *graciouſly* be pleaſed to condeſcend, that my *next Superior* in Dignity and Degree, *Leſs*, may be reſtored to the proper Dignity of his Office, which the ſaid *Leſſer*, by Friends and Intereſt, has long unjuſtly deprived him of. And alſo that I *Leaſt*, may not have *Leſſeſt* put over my *Head*; And your *Petitioner*, *Leaſt*, as in Duty bound, ſhall ever pray, &c.

Bef. Chr.	*Eclipſes* ſeen at	⊙ ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	ſince Chr.	Eclipſes ſeen at	⊙ ☽	Mo. D.	Mid H. M
721	Babylon	M	Mar. 19	10 34	Total	1	Pekin	S	June 10	1
720	Babylon	M	Mar. 8	11 56	1 5	5	Rome	S	Mar. 28	4
720	Babylon	M	Sept. 1	10 18	5 4	14	Pannonia	M	Sep. 26	17
621	Babylon	M	Apr. 21	18 22	2 36	27	Canton	S	July 22	8
523	Babylon	M	July 16	12 47	7 44	30	Canton	S	Nov. 13	19
502	Babylon	M	Nov. 19	12 21	1 52	40	Pekin	S	Apr. 30	5
491	Babylon	M	Apr. 25	12 12	1 44	45	Rome	S	July 31	22
431	Athens	S	Aug. 3	6 35	11 0	46	Pekin	S	July 21	22
425	Athens	M	Oct. 9	6 45	Total	46	Rome	M	Dec. 31	9
424	Athens	S	Mar. 20	20 17	9 0	49	Pekin	S	May 20	7
413	Athens	M	Aug. 27	10 15	Total	53	Canton	S	Mar. 8	20
406	Athens	M	Apr. 15	8 50	Total	55	Pekin	S	July 12	21
404	Athens	S	Sept. 2	21 12	8 40	56	Canton	S	Dec. 25	0
403	Pekin	S	Aug. 28	5 53	10 40	59	Rome	S	Apr. 30	3
394	Gnide	S	Aug. 13	22 17	11 0	60	Canton	S	Oct. 13	3
383	Athens	M	Dec. 22	19 6	2 1	65	Canton	S	Dec. 15	21
382	Athens	M	Jun. 18	8 54	6 15	69	Rome	M	Oct. 18	10
382	Athens	M	Dec. 12	10 21	Total	70	Canton	S	Sep. 22	21
364	Thebes	S	Jul. 12	23 51	6 10	71	Rome	M	Mar. 4	8
357	Syracuſe	S	Feb. 28	22	3 33	95	Epheſus	S	May 21	. .
357	Zant	M	Aug 29	7 29	4 21	125	Alexand.	M	Apr. 5	9
340	Zant	S	Sep. 14	18	9 0	133	Alexand.	M	May 6	11
331	Arbela	M	Sep. 20	10 9	Total	134	Alexand.	M	Oct. 20	11
310	Sicily Iſle	S	Aug. 14	20 5	10 22	136	Alexand.	M	Mar. 5	15
219	Myſia	M	Mar. 19	14 5	Total	137	Bologna	S	Apr. 12	. .
218	Pergamos	M	Sept. 1	Riſing	Total	138	Rome	S	Apr. 1	20
217	Sardinia	S	Feb. 11	1 57	9 6	290	Carthage	S	May 15	3
203	Fruſini	S	May 6	2 52	5 40	304	Rome	M	Aug. 31	9
202	Cumis	S	Oct. 18	22 24	1 0	316	Conſtant.	S	Dec. 30	19
201	Athens	M	Sep. 22	7 14	8 58	334	Toledo	S	July 17	Noon
200	Athens	M	Mar. 19	13 9	Total	348	Conſtant	S	Oct. 8	19
200	Athens	M	Sep. 11	14 48	Total	360	Iſpahan	S	Aug. 27	18
198	Rome	S	Aug. 6			364	Alexand.	M	Nov. 25	15
190	Rome	S	Mar. 13	18	11 0	401	Rome	M	June 11	. .
188	Rome	S	July 16	20 38	10 48	401	Rome	M	Dec. 6	12
174	Athens	M	Apr. 30	14 33	7 1	402	Rome	M	June 1	8
168	Macedon	M	June 21	8 2	Total	402	Rome	S	Nov. 10	20
141	Rhodes	M	Jan. 27	10 8	3 26	447	Compoſt.	S	Dec. 23	0
104	Rome	S	Jul. 18	12 0	11 52	451	Compoſt.	M	Apr. 1	16
63	Rome	M	Oct. 27	6 22	Total	451	Compoſt.	M	Sep. 26	6
60	Gibraltar	S	Mar. 16	ſetting	Centr.	458	Chaves	S	May 27	23
54	Canton	S	May 9	3 41	Total	462	Compoſt.	M	Mar. 1	13
51	Rome	S	Mar. 7	2 12	9 0	464	Chaves	S	July 19	19
48	Rome	M	Jan. 18	10 0	Total	484	Conſtant.	S	Jan. 13	19
45	Rome	M	Nov. 6	4	Total	486	Conſtant.	S	May 19	1
36	Rome	S	May 19	3 5	6 47	497	Conſtant.	S	Apr. 18	6
31	Rome	S	Aug. 20	ſetting	Gr. Ec	512	Conſtant.	S	June 28	23
29	Canton	S	Jan. [illegible]	4 2	11 0	538	England	S	Feb. 14	19
28	Pekin	S	June 18	23 48	Total	540	London	S	June 19	20
26	Canton	S	Oct. 23	4 16	11 15	577	Tours	M	Dec. 10	17
24	Pekin	S	Apr. 7	4 11	2 0	581	Paris	M	Apr. 4	13
16	Canton	S	Nov. 1	5 13	2 8	58[illegible]	Paris	M	Sep. 17	12
2	Pekin	S	Feb. 1	20 8	11 42	590	Paris	M	Oct. 18	6

Eclipſes ſeen at	☉ ☽		Midd.	Digits	Since	Eclipſes ſeen at	☉ ☽			Digits
		Mo. D.	H. M.	eclipſ.	*Chr.*			Mo. D.	H. M.	eclipſ.
Conſtant.	S	Mar. 18	22 6	10d 0′	901	*Arracta*	M	Aug. 2	15 7	^{d}total′
Paris	S	Aug. 12	3 3	11 20	904	*London*	M	May 31	11 47	total
Conſtant.	M	Feb. 1	11 28	Total	904	London	M	Nov. 25	9 0	total
Paris	S	Nov. 5	0 30	9 53	912	London	M	Jan. 6	15 12	total
Paris	M	June 17	12 30	Total	926	Paris	M	Mar. 31	15 17	total
Paris	M	Apr. 16	11 30	Total	934	*Paris*	S	Apr. 16	4 30	11 36
Conſtant.	S	Oct. 4	23 54	11 54	939	*Paris*	S	July 18	19 45	10 7
Conſtant.	M	Jan. 13	7	Total	955	*Paris*	M	Sep. 4	11 18	total
Conſtant.	S	June 3	1 15	Total	961	*Rhemes*	S	May 16	20 13	9 18
England	S	Aug. 13	20	11 1	970	Conſtant.	S	May 7	18 38	11 22
England	M	Jan. 23	14	Total	976	*London*	M	July 13	15 7	total
England	M	July 38	13	Total	985	*Meſſina*	S	July 20	3 52	4 10
England	S	June 8	22	10 35	989	Conſtant.	S	May 28	6 54	8 40
England	M	Jan. 23	13	Total	990	*Fulda*	M	Apr. 12	10 22	9 5
England	S	Aug. 15	4	8 15	990	Fulda	M	Oct. 6	15 4	11 10
London	M	Aug. 30	5 50	10 40	990	Conſtant.	S	Oct. 21	0 45	18 5
England	S	June 4	Noon	7 15	995	Augſburg.	M	July 14	11 27	total
London	M	Feb. 14	7 12	Total	1009	*Ferrara*	M	Oct. 6	11 38	total
Rome	M	Nov. 12	14 37	11 58	1010	Meſſina	S	Mar. 18	5 41	9 12
London	M	Nov. 1	14 2	Total	1016	Nimegu.	M	Nov. 16	16 39	total
Conſtant.	S	Sept. 14	20 43	9 47	1017	Nimegu.	S	Oct. 22	2 8	6
Conſtant.	M	Mar. 27	16 22	Total	1020	Cologne	M	Sep. 4	11 38	total
Rome	M	Jan. 15	9 0	10 17	1023	London	S	Jan. 23	23 29	11
Angouleſ.	S	Feb. 10	21 24	9 42	1030	*Rome*	M	Feb. 20	11 43	total
Paris	M	Feb. 25	13 43	Total	1031	*Paris*	M	Feb. 9	11 51	total
Paris	M	Aug. 21	10 20	Total	1033	*Paris*	M	Dec. 8	11 11	9 17
Paris	S	July 15	21 33	8 8	1034	*Milan*	M	June 4	9 8	total
Paris	M	Dec. 25	8	Total	1037	*Paris*	S	Apr. 17	20 45	10 45
Paris	M	June 20	8	Total	1039	*Auxerre*	S	Aug. 21	23 40	11 5
Paris	S	Nov. 30	0 12	Total	1042	Rome	M	Jan. 8	16 39	total
Paris	M	Dec. 14	8	Total	1044	Auxerre	M	Nov. 7	16 12	10 1
Conſtant.	S	May 14	2 13	9 0	1044	Cluny	S	Nov. 21	22 12	11
Cappadoc.	S	May 3	17 5	10 35	1056	Nuremb.	M	Apr. 2	12 9	total
Paris	M	Feb. 5	5 42	Total	1063	Rome	M	Nov. 8	12 16	total
Paris	S	July 6	18	6 55	1074	Augſb.	M	Oct. 7	10 13	total
Paris	M	Nov. 23	6 26	Total	1080	Conſtant.	M	Nov. 29	11 12	9 36
Paris	M	Mar. 18	7 55	Total	1082	London	M	May 14	10 32	10 2
Paris	M	June 30	15	Total	1086	Conſtant.	S	Feb. 16	4 7	total
Paris	M	Dec. 24	13 45	Total	1089	Naples	M	June 25	6 6	total
Paris	M	Apr. 30	6 19	11 8	1093	Augſburg.	S	Sep. 22	22 35	10 12
Paris	S	May 15	23	4 24	1096	Gemblou.	M	Feb. 10	16 4	total
Paris	M	Oct. 24	11 18	Total	1096	Augſburg.	M	Aug. 6	8 21	total
Fulda	M	Apr. 18	9 0	Total	1098	Augſburg.	S	Dec. 25	1 25	10 12
Paris	S	May 4	23 22	9 20	1099	Naples	M	Nov. 30	4 58	total
Paris	S	Oct. 17	18 58	5 24	1103	Rome	M	Sep. 17	10 18	total
Paris	M	Mar. 29	14 38	Total	1106	Erfurd	M	July 17	11 28	11 54
Paris	M	Mar. 19	7 1	Total	1107	Naples	M	Jan. 10	13 16	total
Paris	M	Mar. 29	15 7	Total	1109	Erfurd	S	May 31	1 30	10 20
Paris	M	Oct. 14	16	Total	1110	*London*	M	May 5	10 51	total
Paris	S	Oct. 29	1	11 14	1113	Jeruſalem	S	Mar. 18	19 0	9 12
Arracta	M	July 23	7 44	11	1114	*London*	M	Aug. 17	15 5	total
Conſtant.	S	Apr. 3	17 52	9 23	1117	*Trier*	M	June 15	13 26	total
onſtant.	S	Aug. 7	23 48	10 30	1117	Trier	M	Dec. 10	12 51	total

Since *Chr.*	Eclipſes ſeen at	☉ ☽	Mo. D	Midd. H.M.	Digits eclipſ	Since *Chr.*	Eclipſes ſeen at	☉ ☽	Mo. D.	Midd. H.M.
1118	Naples	M	Nov.29	15 46	4d 11′	1216	Acre	M	Mar. 5	9 38
1121	Trier	M	Sep. 27	16 47	total	1218	Damietta	M	July 9	9 46
1122	Prague	M	Mar.24	11 20	3 49	1222	Rome	M	Oćt. 22	14 28
1124	Erfurd	M	Feb. 1	6 43	8 39	1223	*Colmar*	M	Apr. 16	8 13
1124	*London*	S	Aug.10	23 29	9 58	1228	*Naples*	S	Dec. 27	9 55
1132	Erfurd	M	Mar. 3	8 14	total	1230	Naples	S	Mar.13	17
1133	Prague	M	Feb. 20	16 41	3 23	1230	*London*	M	Nov.21	13 21
1135	London	M	Dec. 22	20 11	total	1232	Rhemes	S	Oćt. 15	4 29
1142	Rome	M	Feb. 11	14 17	8 30	1245	Rhemes	S	July 24	17 47
1143	Rome	M	Feb. 1	6 36	total	1248	*London*	M	June 7	8 49
1147	Uranches	S	Oćt. 25	22 38	7 20	1255	*London*	M	July 20	9 47
1149	Bary	M	Mar.25	13 54	5 29	1255	Conſtant.	S	Dec. 30	2 52
1151	Eimbeck	S	Aug.28	12 4	4 29	1258	Augſburg.	M	May 18	11 17
1153	Augſburg.	S	Jan. 26	0 42	11	1261	*Vienna*	S	Mar.31	22 4
1154	*Paris*	M	June26	16 1	total	1262	Vienna	M	Mar. 7	5 50
1154	Paris	M	Dec.21	8 30	4 42	1262	*Vienna*	M	Aug.30	14 39
1155	Auranch.	M	June16	8 45	0 53	1263	Vienna	M	Feb. 24	6 52
1160	Rome	M	Aug.18	7 53	6 49	1263	Augſburg.	S	Aug. 5	3 24
1161	Rome	M	Aug. 7	8 15	total	1263	Vienna	M	Aug.20	7 35
1162	Erfurd	M	Feb. 1	6 40	5 56	1265	Vienna	M	Dec.23	16 25
1162	Erfurd	M	July 27	12 30	4 11	1267	Conſtant.	S	May24	23 11
1163	Mont Caſ.	S	July 3	7 40	2 0	1270	*Vienna*	S	Mar.22	18 47
1164	Milan	M	June 6	10 0	total	1272	*Vienna*	M	Aug.10	7 27
1168	London	M	Sep. 18	14 0	total	1274	*Vienna*	M	Jan. 23	10 39
1172	Cologne	M	Jan. 11	13 31	total	1275	*Lauben*	M	Dec. 4	6 20
1176	Auranch.	M	Apr.25	7 2	8 6	1276	Vienna	M	Nov.22	15
1176	Auranch.	M	Oćt. 19	11 20	8 53	1277	Vienna	M	May 18	
1178	Cologne	M	Mar. 5	ſetting	7 52	1279	Francfort	S	Apr. 12	6 55
1178	Auranch.	M	Aug.29	13 52	5 31	1280	London	M	Mar.17	12 12
1178	Cologne	S	Sep. 12		10 51	1284	Reggio	M	Dec. 23	16 11
1179	Cologne	S	Aug. 18	14 28	total	1290	Wittemb.	S	Sep. 4	19 37
1180	*Auranches*	S	Jan. 28	4 14	10 34	1291	London	M	Feb. 14	10 2
1181	Auranch.	S	July 13	3 15	3 48	1302	Conſtant.	M	Jan. 14	10 25
1181	Auranch.	M	Dec. 22	8 58	4 40	1307	*Ferrara*	S	Apr. 2	22 18
1185	Rhemes	S	May 1	1 53	9 0	1309	London	M	Feb. 24	17 44
1186	Cologne	M	Apr. 5	6	total	1309	*Lucca*	M	Aug.21	10 32
1186	Franckf.	S	Apr.20	7 19	4 0	1310	Wittemb.	S	Jan. 31	2 2
1187	*Paris*	M	Mar.25	16 17	8 42	1310	Torcello	M	Feb. 14	4 8
1187	England	S	Sep. 3	21 54	8 6	1310	*Torcello*	M	Aug.10	15 33
1189	England	M	Feb. 2	10	9	1312	Wittemb	S	July 4	19 4
1191	England	S	June23	0 20	11 32	1312	Plaiſance	M	Dec. 14	7 1
1192	France	M	Nov.20	14	6	1313	Torcello	M	Dec. 3	8 5
1193	France	M	Nov.10	5 27	total	1316	Modena	M	Oćt. 1	14 5
1194	London	S	Apr.22	2 15	6 49	1321	Wittemb.	S	June25	18
1200	London	M	Jan. 2	17 2	4 35	1323	Florence	M	May20	15 2
1201	London	M	June17	15 4	total	1324	Florence	M	May 9	6
1204	England	M	Apr.15	12 39	total	1324	Wittemb.	S	Apr. 23	6 3
1204	Saltzburg	M	Oćt. 10	6 32	total	1327	Conſtant.	M	Aug.31	18 2
1207	*Rhemes*	S	Feb.27	10 50	10 20	1328	Conſtant.	S	Feb. 25	13 4
1208	*Rhemes*	M	Feb. 2	5 10	total	1330	Florence	M	June30	15 1
1211	Vienna	M	Nov.21	10 57	total	1330	Conſtant.	M	July 16	4
1215	Cologne	M	Mar.16	15 35	total	1330	Prague	M	Dec.25	15 4
1216	Acre	S	Feb. 18	21 15	11 36	1331	Prague	S	Nov.20	20

TALOGUE of Ancient *Hiſtorical* ECLIPSES, continued, from 1331 to 1485 ſince *Chriſt*.

Eclipſes ſeen at	☉ ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	Since *Chr.*	Eclipſes ſeen at	☽ ☉	Mo. D.	Midd. H. M.	Digits eclipſ.
Prague	M	Dec. 14	18	11^{d} ′	1421	Forli	M	Feb. 17	8 2	^{d}tot. ′
Wittemb.	S	May 14	3	10 18	1422	Forli	M	Feb. 6	8 26	11 7
Ceſena	M	Apr. 19	10 33	total	1424	Wittemb.	S	June 26	3 57	11 20
Conſtant.	M	Nov. 23	12 23	total	1431	*Forli*	S	Feb. 12	2 4	1 30
Conſtant.	S	Dec. 8	22 15	6 30	1433	Wittemb.	S	June 17	5	total
Conſtant.	M	May 20	14 27	total	1438	Wittemb.	S	Sep. 18	20 59	8 7
Alexand.	S	Oct. 6	18 40	8 55	1442	Rome	M	Dec. 17	3 56	total
Wittemb.	M	June 30	12 20	*total*	1448	Tubing.	S	Aug. 28	22 23	8 53
Wittemb.	S	Sep. 16	20 45	8 43	1450	Conſtant.	M	July 24	7 19	total
Florence	M	Feb. 16	11 43	total	1457	Vienna	M	Sep. 3	11 17	total
Conſtant.	S	May 4	22 15	8 54	1460	*Auſtria*	M	July 3	7 31	5 23
Sienna	M	Jan. 16	8 27	total	1460	*Auſtria*	S	July 17	17 32	11 19
Eugebin	M	Nov. 3	17 5	total	1460	*Vienna*	M	Dec. 27	13 30	total
Auſburg.	S	Jan. 11	0 16	6 22	1461	*Vienna*	M	June 22	11 50	total
Auſburg.	M	June 21	11 10	total	1461	*Rome*	M	Dec. 17		total
Forli	S	Oct. 29	0 43	9	1462	Viterbo	M	June 11	15	7 38
Conſtant.	M	June 1	13	10 31	1462	*Viterbo*	S	Nov. 21	0 10	2 6
Conſtant.	S	June 15	18 1	11 38	1464	*Padua*	M	Apr. 21	12 43	total
Forli	S	Oct. 18	21 47	9 32	1465	*Rome*	S	Sep. 20	5 15	8 46
Conſtant.	S	Apr. 15	3 1	10 48	1465	Rome	M	Oct. 4	5 12	total
Vienna	M	Mar. 20	13 13	total	1469	Rome	M	Jan. 27	7 9	total
Wittemb.	S	June 6	6 43	total	1485	Norimb.	S	Mar. 16	3 53	11
Franckf.	S	Mar. 25	22 5	1 45						

TALOGUE of computed ECLIPSES, according to RICCIOLUS and *l'Art erifier les Dates*, the laſt marked *, from 1486 to 1506 ſince *Chriſt*; the Me- n and Tables computed by, from *Ricciolus*, unknown.

☉ ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	Since *Chr.*	☉ ☽	Mo. D.	Midd. H. M.	Digits eclipſ.
S	Feb. 28	5 41	^{d}total ′	1496	M	Jan. 29	14	^{d}* ′
S	Mar. 5	17 43	9 0	1497	M	Jan. 18	6 38	total
M	Feb. 7	15 49	total	1497	S	July 29	3 2	3 0
S	July 20	2 6	7 0	1499	M	June 22	17	*
M	Jan. 28	6	*	1499	S	Aug. 23	18	*
S	July 8	17 30	4 0	1499	M	Nov. 17	10	*
M	Dec. 7	17 41	total	1500	S	Mar. 27	in the	night
S	May 19	noon	*	1500	M	Apr. 11	at	noon
M	June 2	10 6	total	1500	M	Oct. 5	14 2	10 0
M	Nov. 26	18 25	total	1501	M	May 2	17 49	total
S	May 8	2 19	9 0	1502	S	Sep. 30	19 45	10 0
M	Nov. 15	18	*	1502	M	Oct. 15	12 25	2 0
S	Apr. 26	7	*	1503	M	Mar. 12	9	*
S	Oct. 20	23	*	1503	S	Sep. 19	22	*
M	Apr. 1	14 0	total	1504	M	Feb. 29	13 36	total
S	Oct. 10	2 40	8 0	1504	S	Mar. 16	3	*
S	Mar. 7	4 12	4 0	1505	M	Aug. 14	8 18	total
M	Mar. 21	14 38	total	1506	M	Feb. 7	15	*
M	Sep. 14	19 45	total	1506	S	July 20	3 11	2
M	Mar. 10	16	*	1506	M	Aug. 3	10	*
S	Aug. 19	17	*					

A CATALOGUE of computed ECLIPSES continued, according t
and *l'Art de verifier les Dates*; the laſt marked ✱, from 1507 to 15
Chriſt, for the Meridian of *Ulm* in *Swabia*, from the *Alphonſine Tables*.

S.C.1507	⊙ & ☽	M. D.	Midd. H. M.	Digits eclipſ.	S.C.1523	⊙ & ☽	M. D.	Midd. H. M.	Digits eclipſ.	S.C.1538	⊙ & ☽	M. D.	Mid H.
07	S	Jan. 12	19	d ✱ '	23	M	Mar. 1	8 26	d total '	38	M	Nov. 6	5
08	S	Jan. 2	4	✱	23	M	Aug. 25	15 24	total	39	S	Apr. 18	4
08	S	May 29	6	✱	24	S	Feb. 4	1	✱	40	S	Apr. 6	17
08	M	June 12	17 40	total	24	M	Aug. 16	16	✱	41	M	Mar. 11	16
09	M	June 2	11 11	7 0	25	S	Jan. 23	4	✱	41	S	Aug. 21	0
09	S	Nov. 11	22	✱	25	M	July 4	10 10	total	42	M	Mar. 1	8
10	M	Oct. 16	19	✱	25	M	Dec. 29	10 46	total	42	S	Aug. 10	17
11	M	Oct. 6	11 50	total	26	M	Dec. 18	10 30	total	43	M	July 15	16
12	M	Sept. 25	3 56	total	27	S	Jan. 2	3	✱	44	M	Jan. 9	18
13	S	Mar. 7	0 30	6 0	27	M	Dec. 7	10	✱	44	S	Jan. 23	21
13	S	Aug. 30	1	✱	28	S	May 17	20	✱	44	M	July 4	8
15	M	Jan. 29	15 18	total	29	M	Oct. 16	20 23	11 55	44	M	Dec. 28	18
16	M	Jan. 19	6 0	total	30	S	Mar. 28	18 23	8 24	45	S	June 8	20
16	M	July 13	11 37	total	30	M	Oct. 6	12 11	total	45	M	Dec. 17	18
16	S	Dec. 23	3 47	3 0	31	M	Apr. 1	7	✱	46	S	May 30	5
17	S	June 18	16	✱	32	S	Aug. 30	0 49	3 35	46	S	Nov. 22	23
17	M	Nov. 27	19	✱	33	M	Aug. 4	11 50	total	47	M	May 4	10
18	M	May 24	11 19	9 11	33	S	Aug. 19	17	✱	47	M	Oct. 28	4
18	S	June 7	17 56	11 0	34	S	Jan. 14	1 42	5 45	47	S	Nov. 12	2
19	S	May 28	1	✱	34	M	Jan. 29	14 25	total	48	S	Apr. 8	3
19	S	Oct. 23	4 33	6 0	35	S	June 30	noon	✱	48	M	Apr. 22	11
19	M	Nov. 6	6 24	total	35	M	July 14	8	✱	49	M	Apr. 11	15
20	M	May 2	7	✱	35	S	Dec. 24	2	✱	49	M	Oct. 6	6
20	S	Oct. 11	5 22	3	36	S	June 18	2 2	8 0	50	S	Mar. 16	20
20	M	Oct. 25	19	✱	36	M	Nov. 27	6 21	10 15	51	M	Feb. 20	8
20	M	May 21	17	✱	37	M	May 24	8 3	total	51	S	Aug. 31	2
21	S	Apr. 6	19	✱	37	S	June 7	7	✱	53	S	Jan. 12	22
21	S	Sep. 30	3	✱	37	M	Nov. 16	14 56	total	53	S	July 10	7
22	M	Sep. 5	12 17	total	38	M	May 13	14 24	3 0	53	M	July 24	16

From 1554 to 1576 ſince *Chriſt*, for the Meridian of *Antwerp*, from the *Prute*

S.C.1554	⊙ & ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	S.C.1561	⊙ & ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	S.C.1569	⊙ & ☽	Mo. D.	Mid H.
54	S	June 29	6	d ✱ '	61	S	Feb. 13	19	d ✱ '	69	M	Mar. 2	15
54	M	Dec. 8	13 7	10 12	62	S	Feb. 3	5	✱	70	M	Feb. 20	5
55	M	June 4	15 0	total	62	M	July 15	15 40	total	70	M	Aug. 15	9
55	S	Nov. 13	19	✱	63	S	Jan. 22	19	✱	71	S	Jan. 25	4
56	S	Nov. 1	18 0	9 41	63	S	June 20	4 50	8 38	72	S	Jan. 14	19
56	M	Nov. 16	12 44	6 55	63	M	July 5	8 4	11 34	72	M	June 25	9
57	S	Oct. 20	20	✱	65	S	Mar. 7	12 53		73	S	June 28	18
58	M	Apr. 2	11 0	9 50	65	M	May 14	16	✱	73	S	Nov. 24	4
58	S	Apr. 18	1	✱	65	M	Nov. 7	12 46	11 46	73	M	Dec. 8	6
59	M	Apr. 16	4 50	total	66	M	Oct. 28	5 38	total	74	S	Nov. 13	3
60	M	Mar. 11	15 40	4 13	67	S	Apr. 8	23 4	9 34	75	S	May 19	8
60	S	Aug. 21	1 0	6 22	67	M	Oct. 17	13 43	2 40	75	S	Nov. 2	5
60	M	Sep. 4	7	✱	68	S	Mar. 28	5	✱	76	M	Oct. 7	9

talogue of computed Eclipſes continued, according to *Ricciolus* and *l'Art de rifier les Dates,* the laſt marked ✱, from 1577 to 1585 ſince *Chriſt,* for the Meri- an of *Tubing,* from the *Prutenic Tables.*

Mo. D.	Midd. H. M.	Digits eclipſ.	S. C. 1580	☉ & ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	S. C. 1583	☉ & ☽	Mo. D.	Midd. H. M.	Digits eclipſ.
Apr. 2	8 33	^{d}total′	80	M	Jan. 31	10 7	^{d}total′	83	M	Nov 28	21 54	total
Sep. 26	13 4	total	81	M	Jan. 19	9 22	total	84	S	May 9	18 20	3 36
Sep. 15	13 4	2 26	81	M	July 15	17 51	total	84	M	Nov. 17	14 15	total
Feb. 15	5 41	8 30	82	M	Jan. 8	10 29	0 53	85	S	Apr. 29	7 53	11 7
Aug. 20	19 0	✱	82	S	June 19	17 5	7 5	85	M	May 13	5 2	6 54

1586 to 1594 ſince *Chriſt,* for the *Meridian* of *Venice,* from the *Prutenic Tables.*

Sep. 27	8	✱	90	S	Feb. 4	5	✱	91	M	Dec. 29	16 11	^{d}total′
Oct. 12	noon	✱	90	M	July 16	17 4	3 54	92	M	June 24	10 13	8 58
Sep. 16	9 28	10 2	90	S	July 30	19 57	10 27	92	M	Dec. 18	7 24	5 54
Feb. 26	1 23	1 3	91	M	Jan. 9	6 21	9 40	93	S	May 30	2 30	2 38
Mar. 12	14 14	total	91	M	July 6	5 8	total	94	S	May 19	14 58	10 23
Sep. 4	17 30	total	91	S	July 20	4 2	1 0	94	M	Oct. 28	19 15	9 40
Aug. 10	18	✱										

1595 to 1600 ſince *Chriſt,* for the Meridian of *Frankfort* on *Oder,* from the *Prutenic Tables.*

Apr. 9	*Ter. del*	*Fugo*	96	S	Sep. 21	in Chi	na	98	M	Aug. 31	*Magel*	8 34
Apr. 24	4 11	otal	96	M	Oct. 6	21 15	4 35	99	M	Feb. 10	17 21	total
May 7	22	✱	97	S	Mar. 17	S.Pet.	Iſle	99	S	July 22	4 31	4 18
Oct. 3	2 4	5 18	97	S	Sep. 11	*Picora*	9 49	99	M	Aug. 6		total
Oct. 18	20 47	total	98	M	Feb. 20	18 12	10 55	1600	S	Jan. 15	*Java*	11 48
Mar. 28	in *Chili*		98	S	Mar. 6	22 12	11 57		M	Jan. 30	6 40	2 58
Apr. 12	8 51	6 4	98	M	Aug. 16	8 15	total		S	July 10	2 10	5 39

1601 to 1640 ſince *Chriſt,* for the Meridian of *Frankfort on Oder,* from the *Tychonic Table.*

Jan. 4	Ethio.	9 40	1605	S	Apr. 18	Madag	5 31	1609	M	Dec. 26	19	5 50
June 15	6 18	4 52	05	M	Sept. 27	4 27	9 26	10	S	Jan. 9	1 31	total
June 29	*China*	4 29	05	S	Oct. 12	2 32	9 24	10	M	Jun. 20	*Java*	10 46
Dec. 9	7 6	10 53	06	S	Mar. 8	Mexic	6 0	10	S	July 5	16 58	11 13
Dec. 24	2 46	9 52	06	M	Mar. 24	11 17	total	10	M	Dec. 15	*Cyprus*	4 50
May 21	greenl	2 41	06	S	Sep. 2	Magel	6 40	10	S	Dec. 29	16 47	4 23
June 4	7 18	total	06	M	Sep. 16	15 6	total	11	M	June 10	*Califor*	11 30
June 19	*N.Gra*	5 43	07	S	Feb. 25	21 48	1 13	12	S	May 14	10 38	7 22
Nov. 13	*Magel*	3	07	M	Mar. 13	6 36	1 22	12	M	May 29	23 38	7 14
Nov. 28	10 2	total	07	S	Sep. 5	15 40	4 7	12	S	Nov. 8	3 22	9 49
May 10	*China*	11 21	08	S	Feb. 15	at the	*Antip.*	12	S	Nov. 22	Magel	9 0
May 24	11 41	7 59	08	M	Jul. 27	0 30	1 53	13	M	Apr. 20	Magel	lanica
Nov. 3	*Rom.* 1	11 17	08	S	Aug. 9	4 39	0 40	13	S	May 4	0 35	total
Nov. 18	7 31	3 26	09	M	Jan. 19	15 21	10 32	13	S	May 19	E.Tar	tary
Apr. 29	*Arab.*	9 32	09	S	Feb. 4	Feugo	5 22	13	M	Oct. 13	S.Am	erica
Oct. 22	*Peru*	6 49	09	M	July 16	12 8	total	13	S	Oct. 28	4 19	total
Apr. 3	9 19	11 49	09	S	July 30	Canad	4 10	14	S	Apr. 8	NGui.	8 44

The foregoing Hiſtorical Eclipſes (in p. 56, 57, 58, 59.) *obſerved from* 721 *before,*
5 ſince Chriſt, *according to* Struyk's *Introduction to Univerſal Geography, were col-*
from Ptolemy, Thucydides, Plutarch, Calviſius, Xenophon, Diodorus Siculus,
Polybius, Titus Livius, Cicero, Lucanus, Theophantes, Dion Caſſius, *and others.*

A CATALOGUE of computed ECLIPSES continued, according to
and *L'Art de verifier les Dates*; the laſt marked ✳, from 1605 to 16
Chriſt, for Meridian of *Frankfort on Oder*, from the *Tychonic Tables*.

S. C. 1614	⊙ & ☽	M. D.	Midd. H. M.	Digits eclipſ.	S. C. 1623	⊙ & ☽	M. D.	Midd. H. M.	Digits eclipſ.	S. C. 1632	⊙ & ☽	M. D.	Midd. H. M
14	M	Apr. 23	17 36	^{d}5 25′	23	M	Oct. 8	0 22	^{d}8 35′	32	S	Apr. 19	C.Go
14	S	Oct. 3	0 57	5 2	23	S	Oct. 23	*Califor*	10 46	32	M	May 4	1 2
14	M	Oct. 17	4 38	4 56	24	S	May 18	N. Ze.	6 0	32	S	Oct. 13	*Mex*
15	S	Mar. 29	*Goa*	10 38	24	M	Apr. 3	7 9	total	32	M	Oct. 27	12 2
15	S	Sept. 22	Salom	Iſle	24	S	Apr. 17	*Antar*	*Circle*	33	S	April 8	5 1
10	M	Mar. 3	1 58	total	24	S	Sep. 12	*Magel*	*lanica*	33	S	Oct. 3	*Mal*
16	S	Mar. 17	Mexic	6 47	24	M	Sep. 26	8 55	total	34	M	Mar. 14	9 3
16	M	Aug. 26	15 33	total	25	S	Mar. 8	*Florid.*		34	S	Mar. 28	*Jap*
16	S	Sept. 10	Magel	10 33	25	M	Mar. 23	14 11	2 11	34	M	Sep. 7	5
17	S	Feb. 5	Magel	lanica	25	S	Sep. 1	S. Pet.	Iſle	34	S	Sep. 22	CGH
17	M	Feb. 20	1 49	total	25	M	Sep. 16	11 41	5 6	35	S	Feb. 17	*Ant*
17	S	Mar. 6	22	✳	26	S	Feb. 25	Mada.	8 27	35	M	Mar. 3	9 2
17	S	Aug. 1	*Biar*	*mia*	26	M	Aug. 7	7 48	0 25	35	S	Mar. 18	Mex
17	M	Aug. 16	8 22	total	26	S	Aug. 21	In	*Mexic.*	35	S	Aug. 12	Icela
18	S	Jan. 26	*Magel*	*lanica*	27	M	Jan. 30	11 38	10 21	35	M	Aug. 27	16
18	M	Feb. 9	3 29	2 57	27	S	Feb. 15	*Magel*	*lanica*	36	S	Feb. 6	
18	S	July 21	*Mexi*	*co*	27	M	July 27	9 4	total	36	M	Feb. 20	1
19	S	Jan. 15	*Califo*	*rnia*	27	S	Aug. 1	*Tenduc*	10 0	36	S	Aug. 1	*Tart*
19	M	June 26	12 40	3 10	28	S	Jan. 6	*Tenduc*	5 40	36	M	Aug. 16	4 3
19	S	July 11	Africa	11 39	28	M	Jan. 20	10 11	total	37	S	Jan. 26	*Cam*
19	M	Dec. 20	15 53	11 39	28	S	July 1	*C.Good*	*Hope*	37	S	July 21	*Ju*
19	M	Dec. 20	15 53	10 47	28	M	July 16	11 26	total	37	M	Dec. 31	0
20	S	May 31	Arctic	Circle	28	S	Dec. 25	in Eng	land	38	S	Jan. 14	*Per*
20	M	Jun. 14	13 47	Total	29	M	Jan. 9	1 36	4 27	38	M	June 25	20 1
20	S	Jun. 29	Magel	7 20	29	S	June 21	*Ganges*	11 25	38	S	July 11	*Ma*
20	M	Dec. 9	6 39	Total	29	S	Dec. 14	*Peru*	10 14	38	S	Dec. 5	*lan.*
20	S	Dec. 23	Magel	lanica	30	M	May 25	17 56	6 0	38	M	Dec. 20	15
21	S	May 20	14 54	10 44	30	S	June 10	7 47	9 8	39	S	Jan. 4	*Tar*
21	M	June 3	19 42	7 53	30	M	Nov. 19	11 24	9 27	39	S	June 1	5
21	S	Nov. 13	*Magel*	*lanica*	30	S	Dec. 3	*NGui.*	10 10	39	M	June 15	2
21	M	Nov. 28	15 43	3 38	31	S	Apr. 30	*Antar.*	*Circ.*	39	S	Nov. 24	Ma
22	S	May 10	C. Ver	11 52	31	M	May 15	8 15	total	39	M	Dec. 9	11
22	S	Nov. 2	Malac	I.	31	S	Oct. 24	*C.Good*	*Hope*	40	S	May 20	N.S
23	M	Apr. 14	7 19	10 54	31	M	Nov. 8	12 0	total	40	S	Nov. 13	Pe
23	S	Apr. 29											

Eclipſes of the *Moon* are of great Uſe for aſcertaining the Periods of her M
pecially *ſuch Eclipſes* as are obſerved to be alike in all Circumſtances, havin
tervals between them. In Geography the Longitude of Places are found by
as for which Purpoſe Eclipſes of the ☽ are of more Uſe than thoſe of the S
more frequently viſible, and becauſe the ſame Eclipſe of the ☽ is of equal
Continuance in all Places where it is viſible. In Chronology both so
nar Eclipſes ſerve to determine the exact Time of any paſt Event: ther
many Circumſtances obſervable in each Eclipſe, with Regard to its Quantity,
where it is ſeen (*eſpecially of the* ⊙) Time of Day or Night, which makes
impoſſible that two Eclipſes, in an Interval of many Ages, can happen a
Circumſtances.

CATALOGUE of computed ECLIPSES continued, according to *Ricciolus*, and *l'Art de Verifier les Dates*; the laſt marked *, from 1641, to 1660, ſince Chriſt, for the *Meridian* of *Bologna*, from the *Lansbergian Tables*.

M. D.	Midd. H. M.	Digits eclipſ. d ′
Ap.25	1 2	9 49
May 9	*Peru*	10 16
Oct.18	8 19	6 31
Nov. 2	18 46	
Mar.30	*Eſtotl.*	4 0
Apr.14	14 31	Total
Sept.25	*Magel*	*lan.*
Oct. 7	16 45	total
Mar.19	13 53	
Apr. 3	21 10	3 9
Sept.12	17 0	
Sept.27	7 38	6 0
Mar. 8	6 20	
Aug.31	18 10	
Feb. 10	7 45	8 52
Feb. 26	*Rom* I.	10 46
Aug. 7	2 4	total
Aug.21	0 35	4 40
Jan. 16	Str. of	*Anian*
Jan. 30	18 11	total
July 12	6 57	
July 27	6 2	total
Jan. 5	12 10	
Jan. 20	9 43	4 47
July 2	0 9	

S. C. 1647	⊙ & ☽	M. D.	Midd. H. M.	Digits eclipſ. d ′
47	S	Dec. 25	13 38	
48	M	June 5	0 55	4 28
48	S	June20	13 28	
48	M	Nov.29	19 17	7 40
48	S	Dec. 13	21 48	
49	M	May 25	15 20	total
49	S	June 9	Art.C	4 0
49	S	Nov. 4	2 10	5 19
49	M	Nov.18	19 56	total
50	S	Apr.30	5 54	
50	M	May 15	8 37	7 57
50	S	Oct. 24	77 17	
50	M	Nov. 7	20 29	5 3
51	S	Apr.19	*Tabor.*	
51	S	Oct. 14	2 15	
52	M	Mar.24	16 52	8 50
52	S	Apr. 7	22 40	9 59
52	M	Sep. 17	7 27	9 49
52	S	Oct. 2	5 2	
53	S	Feb.27		
53	M	Mar.13	17	
53	S	Aug.22	4 9	total
53	M	Sept. 6	23 45	
54	S	Feb. 16	9 10	total

S. C. 1654	⊙ & ☽	M. D.	Midd. H. M.	Digits eclipſ. d ′
54	M	Mar. 2	19 25	3 14
54	S	Aug.11	22 24	2 28
54	M	Aug.27	11 49	1 53
55	S	Feb 6	2 37	4 20
55	S	Aug. 1	14 19	
55	M	Aug.16	16	*
56	M	Jan. 11	9 4	10 0
56	M	July 6	3 17	total
56	S	July 21	11 48	
56	M	Dec. 30	23 30	total
57	S	June 11	11 20	
57	M	June25	9 35	total
57	S	Dec. 4	20 0	
57	M	Dec. 20	7 47	3 9
58	S	May 31	16 0	
58	M	June 14	22 58	
58	M	Nov. 9	13 56	0 10
58	S	Nov.24	11 36	
59	M	May 6	8 34	8 5
59	S	May 20	17 4	
59	M	Oct. 29	16 16	5 52
59	S	Nov.14	4 25	9 51
60	M	Apr.24	21 58	total
60	S	Oct. 3	22 34	
60	M	Oct. 18	0 32	total
60	S	Nov. 2	13 48	

1661 to 1700 ſince Chr. for the meridian of *Rome*. From the *Tychonic* Tables.

Mar.29	22 32	d ′
Apr.14	4 28	
Sep. 23	1 36	11 19
Oct. 7	14 51	7 4
Mar.19	15 8	
Apr.12	1 8	
Feb. 21	16 11	3 14
Mar. 9	5 47	
Aug 18	8 45	total
Sep. 1	8 8	
Jan. 27	20 40	
Feb. 11	3 16	
July 22	14 48	
Aug.20	22 10	

65	M	Jan. 30	18 47	d4 34′
65	S	July 12	7 48	
65	M	July 26	13 31	0 10
66	S	Jan. 4	21 35	
66	S	July 1	19 0	11 10
67	M	June 5	noon	
67	S	July 21	2 32	
67	S	Nov.15	11 30	
68	S	May 10	ſet	
68	M	May 25	16 26	9 32
68	S	Nov. 4	2 53	5 50
68	M	Nov.18	3 54	6 45
69	S	Apr.29	18 18	
69	S	Oct. 24	10 13	

70	S	Apr. 19	7 0	d ′
70	S	Sep. 10	19 0	
70	M	Sep. 28	15 43	9 7
70	S	Oct. 13	12 5	
71	S	Apr. 8	23 29	
71	S	Sep. 2	21 25	
71	M	Sep 18	7 44	total
72	S	Feb. 28	3 38	
72	M	Mar. 13	3 17	
72	S	Aug.22	6 43	
72	M	Sep. 6	18 54	
73	S	Feb. 16	7 29	
73	S	Aug.11	21 44	

is difficult to obſerve the exact Time of *Beginning* or *End* of an Eclipſe of ☽, with
od *Teleſcope*; ⊖'s Shadow being ſo faint about the *Edges*, that when ☽ firſt enters
aſt quits it, the Obſcuration of either Limb is hardly ſenſible. And the moſt diligent
ervers cannot be certain of the true Beginning or End, to ſeveral Seconds of Time.
ut the Beginning and End of Eclipſes of the ⊙ are inſtantaneouſly viſible. The In
t the Edge of the ☽ touches the ⊙'s Diſk, his Roundneſs appears broken on the Par

A Catalogue continued, of computed ECLIPSES, according to *Ricciolus* and *de verifier les Dates*, the laſt marked ✱, from 1661 to 1700 ſince *Chriſt*, Meridian of *Rome*, from the *Tychonic* Tables.

S. C. 1674	☉ & ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	S. C. 1684	☉ & ☽	Mo. D.	Midd. H. M.	Digits eclipſ.	S. C. 1692	☉ & ☽	Mo. D.	Midd. H. M.	D
74	M	Jan. 21	18 22	d 11 21′	84	S	Jan. 16	6 34	d ′	92	M	July 27	10 9	d
74	S	Feb. 5	9 4		84	M	June 26	15 18	1 35	93	M	Jan. 21	17 25	
74	M	July 17	9 40	total	84	S	July 12	3 26	total	93	M	July 17	noon	
75	S	Jan. 11	8 29	total	84	M	Dec. 21	11 18	9 45	94	M	Jan. 11	noon	
75	S	Jan. 25	10 36		85	S	Jan. 4	16 0		94	S	June 22	4 22	
75	M	July 6	6 31	total	85	M	June 16	6 0		94	M	July 6	13 51	
76	S	June 10	21 6	4 34	85	M	Dec. 10	11 26	total	95	S	May 11	6 3	
76	M	June 25	6 26		86	S	May 21	17 9		95	M	May 28	noon	
76	S	Dec. 4	20 52		86	M	June 6	noon		95	M	Nov. 20	8 0	
77	S	Nov. 24	12 5		86	M	Nov. 29	12 22	total	95	S	Dec. 5	17 7	
77	M	May 16	16 25	8 15	87	S	May 11	1	✱	96	M	May 16	12 45	
78	M	May 6	5 30		87	M	May 26	14	✱	96	S	May 30	12 56	
78	M	Oct. 29	9 17	total	88	S	Apr. 9	16 27		96	M	Nov. 8	17 30	
79	S	Apr. 10	21 0		88	M	Apr. 15	7 4	6 49	96	S	Nov. 23	17 32	
79	M	Apr. 25	11 53	5 47	88	M	Oct. 9	noon		97	S	Apr. 20	14 32	
80	S	Mar. 29	23 22		88	S	Oct. 25	19 40		97	M	May 5	18 27	
80	S	Sep. 22	7 57		89	M	Apr. 4	7 42	total	97	M	Oct. 29	8 44	
81	M	Mar. 4	noon		89	M	Sept. 28	15 46	total	98	S	Apr. 10	9 13	
81	S	Mar. 19	13 43		90	S	Mar. 10			98	S	Oct. 3	15 29	
81	M	Aug. 28	15 22	10 35	90	M	Mar. 24	11 14	5 53	99	M	Mar. 15	8 14	
81	S	Sept. 11	15 43		90	S	Sep. 3			99	S	Mar. 30	22 0	
82	M	Feb. 21	12 28	total	90	M	Sep. 18	2 42		99	M	Sept. 8	23 22	
82	M	Aug. 17	18 56	total	91	S	Feb. 27	17 30		99	S	Sept. 23	22 38	
83	S	Jan. 27	1 35	10 30	91	S	Aug. 23	5 51		1700	M	Mar. 4	20 11	
83	M	Feb. 9	3 39		92	M	Feb. 2	3 20			M	Aug. 29	1 42	
83	M	Aug. 6	20 36		92	S	Feb. 16	17 31						

of *Contact*; and the Inſtant ſhe quits the Sun's Diſk, he appears completely round

The Moon's Diameter, as well as the Sun's, is ſuppoſed to be divided into 12 Parts, called *Digits*; and as many of theſe Parts in ☽'s Diſk as are darkened falling into ⊖'s Shadow, ſo many Digits is ☽ eclipſed. And all that ſhe is eclipſed 12 *Digits* is the Quantity of Digits ⊖'s Shadow more than covers the Body of ☽, that Edge to which the Shadow is *neareſt* at the Middle of *her Eclipſe*.

When ☽ is furtheſt fr. ⊖, ſhe moves ſloweſt, when the greateſt Duration of he and central Eclipſe will be about 3h 57m 6 Sec. But being at her *neareſt* Diſt. when ſhe moves quickeſt, the Duration of her total and central Eclipſe will be 3h 37m and 26 Seconds only.

☽ is ſometimes ſeen totally eclipſed in the *Horizon* when ☉ is alſo viſible in t poſite Part; becauſe the horiz. Refr. (being about 34′, and Diam. ☉ and ☽ ab ſame, at a mean) cauſes both thoſe Lights to appear above Hor. when they are a below. ☽ is directly opp. to ☉ when ſhe comes to Cent. of ⊖'s Shad. in paſſing t when ſhe is viſible, if above Hor. and Sky be clear, appearing of a Colour like ta Copper or Iron almoſt red hot; which ſome have imagined to be her native Ligh ariſing fr. the lower and denſer Atmoſ. near Surf. refracting ☉'s ſcattered Ra more inverted (the upper Atmoſ. having leſs and leſs refractive Power) into ⊖'s ſo as to make ☽ viſ.—whereas if ⊖ had no Atmoſ. ☽ could no more be ſeen i Eclipſes than now at new ☽.—If ☽ was near enough to paſs thro' ⊖'s dark, in of the faint *Shad.* ſhe could only be ſeen bef. and after paſſing the dark Shadow.

Viſible ECLIPSES, from 1700 to 1800, ſince Chriſt, for the *Meridian* of *Paris*, from *L'Art de verifier les Dates*. *N. S.*

M. denotes Morn, A. Afternoon, t. total.

D.	Middle. H.	S.C. 1729	☉ & ☽	M. D.	Middle. H.	S.C. 1757	☉ & ☽	M. D.	Middle. H.	S.C. 1778	☉ & ☽	M. D.	Middle. H.
eb. 22	11A.	29	M	Feb. 13	9A.t	57	M	July 30	12A.	78	S	June 24	4A.
n. 3	7M.	29	M	Aug. 9	1M.	58	M	Jan. 24	7M.t	78	M	Dec. 4	6M.
n. 29	1M.t	30	M	Feb. 4	4M.	58	S	Dec. 30	7M.	79	M	May 30	5M.t
ec. 23	7M.t	31	M	June 20	2M.	59	S	Jun. 24	7A.	79	M	Nov. 23	8A.
11	7M.	32	M	Dec. 1	10A.t	59	S	Dec. 19	2A.	80	S	Oct. 27	6A.
r. 28	2M.	33	S	May 13	7A.	59	S	Dec. 19	2A.	80	M	Nov. 12	4M.
ay 12	10M.	33	M	May 28	7A.	60	M	May 29	9A.	81	S	Apr. 23	6A.
ct. 21	7A.	35	M	Oct. 2	1M.	60	S	June 13	7M.	81	S	Oct. 17	8M.
r. 17	2M.t	36	M	Mar. 26	12A.t	60	M	Nov. 22	9A.	82	M	Apr. 12	7A.
r. 5	6M.	36	M	Sept. 20	3M.t	61	M	May 18	11A.t	83	M	Mar. 18	9A.t
ct. 14	8M.	36	S	Oct. 4	6A.	62	M	May 8	4M.	83	M	Sept. 10	11A.t
p. 29	9A.	37	S	Mar. 1	4A.	62	S	Oct. 17	8M.	84	M	Mar. 7	3M.
r. 11	2A.	37	M	Sept. 9	4M.	62	M	Nov. 1	8A.	85	S	Feb. 9	1A.
b. 13	11A.	38	S	Aug. 15	11M.	63	S	Apr. 13	8M.	87	M	Jan. 3	12A.t
b. 28	1A.	39	M	Jan. 24	11A.	64	S	Apr. 1	10M.	87	S	Jan. 19	10M.
ly 15	8A.	39	S	Aug. 4	5A.	64	M	Apr. 16	1M.	87	S	June 15	5A.
ly 29	6A.t	39	S	Dec. 30	9M.	65	S	Mar. 21	2A.	87	M	Dec. 24	3A.
n. 23	8A.	40	M	Jan. 13	11A.t	65	S	Aug. 16	5A.	88	S	June 4	9M.
ne 8	6A.	41	M	Jan. 1	12A.	66	M	Feb. 24	7A.	89	M	Nov. 2	12A.
c. 2	4M.	43	M	Nov. 2	3M.t	66	S	Aug. 5	7A.	90	M	Apr. 28	12A.t
ay 3	9M.t	44	S	Aug. 26	9A.	68	M	Jan. 4	5M.	90	M	Oct. 23	1M.t
v. 11	5M.	46	M	Aug. 30	12A.	68	M	June 30	4M.t	91	S	Apr. 3	1A.
r. 27	3M.	47	M	Feb. 14	5M.t	68	M	Dec. 23	4A.t	91	M	Oct. 12	3M.
y 20	6A.	48	S	July. 25	11M.	69	S	June 4	8M.	92	S	Sept. 16	11M.
t. 9	8A.t	48	M	Aug. 8	12A.	69	M	Dec. 13	7M.	93	M	Feb. 25	10A.
g. 29	9A.	49	M	Dec. 23	8A.	70	S	Nov. 17	10M.	93	S	Sept. 5	3A.
n. 13	3A.	50	S	Jan. 8	9M.	71	M	Apr. 28	2M.	94	S	Jan. 31	4A.
ne 29	3M.	50	M	June 19	9A.t	71	M	Oct. 23	5A.	94	M	Feb. 14	11A.t
c. 8	3A.	50	M	Dec. 13	7M.	72	M	Oct. 11	6A.t	94	S	Aug. 25	5A.
c. 22	4A.	51	M	June 9	2M.	72	S	Oct. 26	10M.	95	M	Feb. 4	1M.
y 22	7A.t	51	M	Dec. 2	10A.	73	S	Mar. 23	5M.	95	S	July 16	9M.
v. 1	4M.	52	S	May 13	8A.	73	M	Sept. 30	7A.	95	M	July 31	8A.
t. 21	7A.	53	M	Apr. 17	7A.	74	S	Mar. 12	10M.	97	S	June 25	8A.
p. 25	6A.	53	S	Oct. 26	10M.	76	M	July 31	1M.t	97	M	Dec. 4	6M.
t. 11	5M.	55	M	Mar. 28	1M.	76	S	Aug. 14	5M.	98	M	May 27	7A.t
. 15	7M.	57	M	Feb. 4	6M.	77	S	Jan. 9	5A.	18	M	Oct. 2	11A.

our *Royal Aſtronomer for a Liſt of Eclipſes happening at great Events*, from 754 1133 Years ſince Chriſt.

Columbus, Diſcoverer of the *Weſt-Indies*, being drove on the Iſland of *Ja* 1493, and diſtreſſed for Want of Proviſions, which being refuſed from the he made Uſe of this *Stratagem* to procure himſelf and his Crew Proviſions— ened the Inhabitants with a Plague, foretelling an Eclipſe ſoon to happen, in reof; which happening as he foretold, ſo terrified thoſe illiterate *Indians*, that ly brought him what Proviſions he wanted; throwing themſelves at his Feet, ring his *Forgiveneſs* for having offended him.

Ricciolus's Almageſt. Vol. I. lib. v. c. ii.

A ROYAL EPHEMERIS, for *Greenwich*-Obſervatory, 1761.

CONTAINING

A COMPUTATION of the *Tranſit* of *Venus* over the *Sun*.

All the *Aſtronomical* MOONS, ECLIPSES of the SUN and MOON, and Ec of JUPITER's firſt SATELLITE:

FOR *finding the* LONGITUDE *from* Greenwich, *by Obſervation of thoſe* E *under a diſtant* Meridian.

The MOON's Time of *Southing*, and her *Declination* at *Noon*, for each D

With the *horizontal Semidiameters* of the *Moon* in Degrees and Time; b the Moon's *horizontal Parallax* is immediately known, by Proportion, f Time of *each Day*.

The *Time* of Southing, and *Declination* at Noon, of each of the *five* pl *Bodies*, SATURN, JUPITER, MARS, VENUS, and MERCURY, for every *thi*

USE. *To find the* Latitude *by obſerving the Moon's or a Planet's meridian* A *in any* Longitude *from* Greenwich, *by proportioning the* Southing *and* Decl *for* Greenwich, *to the preſent* Longitude, *from that Meridian*.

2. *For finding the Times of* High-Water *at any* Sea-Port, *for any Day, by ad* *Time of High-Water for that Port, at* New *and* Full-Moon *to the Time of th* Southing *for the Day on which the Time of High-Water is required.*

3. To find the Moon's or a Planet's Riſing and Setting, nearly, in an tude and Longitude (but *eſpecially* for *England)* by ſubtracting and adding miduration Arc according to the preſent Declination at Southing, for th *Latitude*, to and from the Time of their reſpective Southing.

4. The Time of the Moon and Planet's Southing will ſhew the Obſerv and where to look for them.

5. By the Time of the *aſtronomical* Moons foretold, you will not only k Moon's Age, but the *Moon Light* alſo to be expected in *any Place, at an th Year*.

6. By the *Eclipſes* foretold, and the Paſſage of *Venus* over the Sun's F *curious* will be apprized when to obſerve them; and others guarded aga *prize* when they happen.

THE *Tranſit* of VENUS over the SUN, 1761. Computed by Mr. *Tho. Harris*, from the PALLADIUM-TABLES, 1757, the firſt Equations.

App. Time at	*London*			*Bugbrook.*		
June 6, in *Morn.*	H.	M.	S.	H.	M.	S.
Firſt *Contact*	2	3	53	1	59	33
Central *Ingreſs*	2	15	10	2	11	10
Total *Immerſion*	2	26	56	2	22	56
Middle	5	22	38	5	18	38
Ecliptic *Conjunction*	5	44	40	5	40	40
Beginning of *Emerſion*	8	19	52	8	15	52
Central *Egreſs*	8	31	45	8	27	45
Laſt *Contact*	8	43	6	8	39	6
From *Immerſion* to Beg. of *Emerſion*	5	52	56	5	52	56
Central Duration	6	16	35	6	16	35
Total Duration	6	39	13	6	39	13
Sunriſe	3	47	58	3	44	15
From *Sunriſe* to laſt Contact	4	55	8	4	54	51
		′	″		′	″
Neareſt *Approach* of Centers		9	39		9	39

The viſible ECLIPSE of the 1761, computed by Mr. *Tho. H*

App. Time at	*London*		
May 18	H.	M.	S.
Beginning	8	31	29
Beg. of total Dark.	9	38	29
Ecliptic Oppoſition	10	24	15
Middle	10	26	21
End of tot. Dark.	11	14	13
End	12	21	13
Durat. of tot. Dark.	1	34	44
Total Duration	3	49	44
	°	′	″
Digits eclipſed	17	25	47

N. B. *I uſe* +39″ *for the* E *moſphere, according to Directi* *Year* 1758.

☞ Mr. *T. Harris curiouſly* an 2, 3, 4, 5, 7, 10, 11, 12, and 1 in *Lad. Diary* for 1760, which not Room for; but hope to *oblig* all, in our *Original Ladies Diary*

ronom. NEW, FULL, and QUARTER Moons, or the LUNATIONS for 1761. N.S.

January.	Moons.	D.	February.	Moons.	D.	March.	Moons.
9h	44m M. New	5	3h	39m M. New	6	6h	59m A. New
2	12 M. Firſt Q.	12	11	58 M. Firſt Q.	13	7	44 A. Firſt Q.
6	14 A. Full	19	5	47 M. Full	20	6	13 A. Full
11	26 A. Laſt Q.	26	7	50 A. Laſt Q.	28	4	14 A. Laſt Q.
April.		D.	May.		D.	June.	
7	31 M. New	4	5	37 A. New	3	7	44 M. New
2	29 M. Firſt Q.	11	9	1 M. Firſt Q.	9	6	6 A. Firſt Q.
7	47 M. Full	18	10	23 A. Full	17	1	14 A. Full
10	37 M. Laſt Q.	27	2	0 M. Laſt Q.	25	2	26 A. Laſt Q.
July		D.	Auguſt.		D.	September.	
20	31 A. New	7	3	26 A. Firſt Q.	6	7	43 M. Firſt Q.
2	32 M. Firſt Q.	15	7	18 A. Full	14	9	28 M. Full
4	38 M. Full	23	7	57 M. Laſt Q.	21	2	48 A. Laſt Q.
0	1 M. Laſt Q.	29	11	17 A. New	28	9	24 M. New
October.		D.	November.		D.	December.	
2	43 M. Firſt Q.	4	10	51 A. Firſt Q.	4	6	32 A. Firſt Q.
11	6 A. Full	12	11	48 M. Full	11	11	20 A. Full
9	32 A. Laſt Q.	19	5	3 M. Laſt Q.	18	2	33 A. Laſt Q.
10	31 A. New	26	2	35 A. New	26	8	54 M. New

IV. ECLIPSES: II. of the SUN, and II. of the MOON.

Of the Moon, May 18.

	d	m	s	
in.	8	31	40	*Night*; *viſible at Greenwich.*
rſ.	9	38	22	
ddle	10	25	9	
rſ.	11	11	36	
	12	18	38	
nt.	3	46	58	

ntity eclipſed 17d 26′ on
e North Part.

2. *Of the Sun June the third*; *viſible in* Lapland *and* Norway.

3. *Of the Moon, Nov.* 12.

	h	m	s	
Begin.	10	0	3	*Forenoon*; *Greenwich.*
Immer.	10	58	50	
Middle	11	47	57	
Emerſ.	11	51	26	
End	1	35	51	

Quantity eclipſed 19d 58′; viſible at *Japan* and *China*.

4. *Of the Sun Nov. the* 26; viſible in the Southern Parts of the Globe; but not in *Europe*.

THE above *aſtronomical Moons* are no *Church-Moons*, as ſettled by Act of ament; and, being Part of an *Ephemeris*, are *no Almanac-Matter*, nor ſer- for that *Purpoſe*; and therefore not cognizable by the *Stamp-Office*, any more by the *Stationers-Company*, who are veſted with a *Power* of printing all *Engliſh* nacs; but no other — ſo that any Perſon may print a *French Almanac*, or in Language, not *Engliſh*, (paying the Stamps) independent of the Right of the Company. — And, if there could be a Duty *impoſed* on *Aſtronomical Com-* tions, under Pretence of their being *Almanac-Matter*, (though a Subject of nt *Nature)* all Aſtronomical *Tables* might as *juſtly* be imputed *Almanac-Matter*, hich theſe Matters are computed; and there muſt be a Stop, by this Means, to all *Aſtron. Improvements*, and a Suppreſſion of what the Laws never intended. any Perſon *deſignedly* prints all *erroneous Moons*, &c. ſuch as a *New Moon* on of a Month, that really happens on the 20*th*, will any *judicious Perſon* call erroneous Moons *Almanac-Matter*, *properly* ſerving for that *Purpoſe*; when *Nature of Almanac-Matter is limited to certain Week-Days*, *anſwering to certain* h-*days in a regular Succeſſion*? So likewiſe as all *computed Moons*, by Aſtron. s, differ, more or leſs, from Truth and Obſervation, according as *thoſe Tables* re or *leſs* accurate or authentic; and the *computed* Times of thoſe *Moons* being able *Error* (unlike the *fix'd Church* ☽*s)* will any *wiſe Interpreters of the Law* pretend that what is thus *variably* computed, and *indeterminate* in its own Nature (i.e. ronom. *Computation)* is therefore the *fixed and determinate Matter of an Almanac*?

Royal EPHEMERIS for GREENWICH-OBSERVATORY, 1761.

A TABLE for ſhewing the Difference of LONGITUDE from GREEN by OBSERVATION.

Correct Times of the ECLIPSES of the firſt SATELLITE of JUPITER, 1761, N.S. at *Greenwich* Obſervatory.

	January.				February.				March.				April.				May.		
	Emerſion.				Emerſion.				Immerſion				Immerſion				Immerſion		
D.	h	m	s	D.	h	m	s	D.	h	m	s	D.	h	m	s	D.	h	m	s
1	20	29	3	2	16	59	40	27	17	16	39	2	0	43	17	2	2	57	11
3	14	57	11	4	11	28	33	29	11	45	53	3	19	13	27	3	21	25	54
5	9	25	19	6	5	57	31	31	6	15	6	5	13	42	36	5	15*	54	35
7	3	53	28						Computed			7	8	11	45	7	10	23	14
8	22	21	39		*Jupiter* is				by a *New*			9	2	40	53	9	4	51	51
10	16	49	53		ſo near the				*Theory*, a-			10	21	10	0	10	23	20	25
12	11	18	9		Sun, that				greeing			12	15	39	0	12	17	48	56
14	5*	46	26		his 1ſt *Sa-*				with Ob-			14	10	8	11	14	12	17	23
15	23	14	44		*telite* can-				ſervation.			16	4	37	14	16	6	45	46
17	18	43	3		not be ſeen				☞*For the*			17	23	6	15	18	1	14	8
19	13	11	23		till27th of				*Uſe of the*			19	17	35	13	19	19	42	28
21	7	39	45		*March* fol-				*navigator.*			21	12	4	9	21	14*	10	47
23	2	8	8		lowing.				Theſe			23	6	33	4	23	8	39	5
24	20	36	33						Times to			25	1	1	57	25	3	7	22
26	15	5	1						be comp-			26	19	30	49	26	20	35	38
28	9	33	33						ared with			28	13	59	39	28	16	3	52
30	4	2	10						thoſe ob-			30	8	28	26	30	10	32	4
31	22	30	52						ſerved at Sea, or thoſe obſerv'd under any diſt.										

	July.				Auguſt.				September				October.				November		
	Immerſin				Immerſion				Immerſin				Immerſin				Emerſion.		
D.	h	m	s	D.	h	m	s	D.	h	m	s	D.	h	m	s	D.	h	m	s
1	6	57	45	2	3	27	36	1	5	38	38	1	10*	7	17	2	6*	49	59
3	1	25	52	3	21	56	13	3	0	7	43	3	4	36	29	4	1	18	43
4	19*	54	0	5	16*	24	52	4	18	36	50	4	23	5	41	5	19	47	25
6	14	22	9	7	10*	53	33	6	13*	6	0	8	12*	4	4	7	14	16	5
8	8	50	18	9	5	22	16	8	7*	35	12	10	6*	33	14	9	8*	44	44
10	3	18	28	10	23	51	2	10	2	4	25	12	1	2	23	11	3	13	21
11	21	46	40	12	18	19	50	11	20	33	39	13	19	31	40	12	21	41	57
13	16	14	54	14	12*	48	41	13	15*	3	53	15	14*	0	36	14	16	10	30
15	10	43	10	16	7	17	34	15	9*	32	7	17	8*	29	40	17	10*	39	0
17	5	10	28	18	1	46	30	17	4	1	22	19	2	58	42	18	5*	7	26
18	23	39	48	19	20	15	28	18	22	30	37	20	21	27	43	19	23	35	49
20	18	8	11	21	14*	44	28	20	16*	59	52	22	15	56	42	21	18	4	11
22	12*	36	35	23	9*	13	29		*Emerſions*			24	10*	25	40	23	12*	32	32
24	7	5	1	25	3	42	30	22	13*	41	22	26	4	54	46	25	7*	0	51
26	1	33	28	26	22	11	31	24	8*	10	32	27	23	23	30	27	1	29	8
27	20	1	57	28	16*	40	33	26	2	39	43	29	17	52	22	28	19	57	22
29	14*	30	28	30	11*	9	35	27	21	8	54	31	12*	21	12	30	14	25	38
31	8	59	1					29	15*	38	5								

N. B. The *Aſteriſm* (*) is placed againſt the Eclipſes of the 1ſt Satellite *piter*, viſible at *Greenwich* Obſervatory.

uary.	February		March		April		May		June	
Decl. Noon.	☽ South	Decl. at N.	☽ South	Decl. Noon.	☽ South	Decl. Noon.	☽ South	Decl. Noon	☽ South	Decl. Noon.
° ′	h m	° ′	h m	° ′	h m	° ′	h m	° ′	h m	° ′
15S32	21 51	25S37	20 38	26 S 5	21 54	18 S 1	22 10	4S44	23 26	16n36
19 27	22 41	25 48	21 27	25 22	22 40	13 24	22 57	1N17	☌	21 22
22 32	23 31	24 41	22 18	23 27	23 26	8 9	23 48	7 32	0 27	24 46
24 41	☌	22 29	23 6	20 22	☌	2 11	☌	13 29	1 33	26 23
25 43	0 21	19 8	23 54	16 20	0 14	3N52	0 44	18 44	2 38	26 3
25 33	1 8	14 52	☌	11 25	1 3	9 58	1 45	23 0	3 40	23 50
24 11	1 55	9 50	0 42	5 54	1 55	15 38	2 48	25 37	4 35	20 10
21 39	2 41	4 22	1 28	0 1	2 52	20 24	3 53	26 29	5 27	15 49
19 21	3 27	1N25	2 14	5N58	3 52	23 57	4 54	25 40	6 14	10 28
13 45	4 14	7 16	3 4	11 45	4 54	25 58	5 51	22 53	6 59	4 21
8 41	5 3	12 50	3 56	16 58	5 57	26 16	6 45	18 58	7 42	1S21
3 10	5 56	17 50	4 53	21 20	6 58	24 53	7 34	14 8	8 26	6 59
3N0	6 52	21 55	5 53	24 25	7 54	21 50	8 20	8 42	9 10	12 11
8 26	7 52	24 42	6 54	25 59	8 45	17 50	9 4	3 17	9 56	16 48
13 58	8 55	25 55	7 54	25 53	9 32	12 50	9 48	2S27	10 41	20 45
18 52	9 57	25 21	8 51	24 6	10 18	7 17	10 32	8 12	11 29	23 45
22 46	10 58	23 5	9 47	20 50	11 13	1S33	11 17	13 19	12 17	25 41
25 9	11 54	19 18	10 38	16 24	11 49	4 10	12 3	17 52	13 6	26 29
25 48	12 44	14 30	11 29	11 10	12 34	9 42	12 52	21 36	13 55	26 1
24 34	13 32	8 59	12 16	5 28	13 20	14 42	13 42	24 17	14 45	24 21
21 38	14 19	3 15	13 2	0S18	14 6	19 2	14 33	26 1	15 33	21 39
17 24	15 4	2S29	13 47	6 5	14 55	22 29	15 23	26 30	16 19	17 58
12 18	15 49	8 3	14 32	11 23	15 44	24 55	16 12	25 38	17 4	13 31
6 46	16 34	13 4	15 18	16 11	16 35	26 15	16 59	23 50	17 49	8 25
1 6	17 21	17 30	16 5	20 10	17 25	26 20	17 44	20 49	18 31	2 54
4S26	18 47	21 9	16 56	23 16	18 15	25 14	18 30	16 56	19 15	2N53
9 39	18 56	23 52	17 47	25 20	19 4	22 58	19 16	12 13	20 1	8 49
14 28	19 47	25 33	18 37	26 14	19 51	19 39	20 2	6 51	20 51	14 29
18 35	☽ Sem. Diam.		19 27	25 56	20 38	15 25	20 48	1 4	21 48	19 30
21 53	to Hor. Par. as		20 17	24 25	21 24	10 21	21 38	4N59	22 54	23 30
24 18	15′ to 55′ 30″		21 6	21 46			22 30	11 0		

In T.	D.	☽ S.D	T.	D.	☽ S.D in Deg.	In T.	D.	☽ S.D in Deg.	In T.	D.	☽ S.D in Deg	In T.	D.	☽ S.D in Deg.	In Time
s		′ ″	s		′ ″	s		′ ″	s		′ ″	s		′ ″	s
64	1	14 49	68	1	14 51	69	1	15 17	66	8	16 22	76	6	16 24	74
65	9	15 40	65	10	15 59	68	9	16 13	74	10	16 2	72	8	15 57	69
64	11	15 55	68	12	16 4	72	11	16 6	75	12	15 42	67	10	15 30	64
67	13	16 8	73	14	16 7	75	15	15 54	71	14	15 25	64	12	15 11	63
72	15	16 19	76	16	16 6	73	15	15 44	67	16	15 11	63	14	14 58	65
76	17	16 18	74	18	15 58	69	17	15 31	64	18	14 57	65	16	14 51	67
75	19	16 6	69	20	15 44	65	19	15 15	64	20	14 51	68	18	14 48	69
70	21	15 39	65	22	15 23	64	21	14 58	66	22	14 45	68	20	14 48	67
65	23	15 17	64	24	15 5	65	23	14 49	68	24	14 49	67	22	14 57	65
63	25	14 56	65	26	14 51	67	25	14 46	69	26	15 2	65	24	15 12	63
64	27	14 48	67	28	14 47	68	27	14 56	67	28	15 27	64	26	15 38	65
66				30	14 56	68	29	15 20	66	30	16 0	67	28	16 10	63

	July.		Auguſt.		September.		October.		November.		D
D.	☽ South	☽ D cl. Noon	☽ South	Decl. Noon	☽ South	Decl. Noon	☽ South	Decl. Noon	☽ South	Decl. Noon	So
	h m	° ′	h m	° ′	h m	° ′	h m	° ′	h m	° ′	h
1	☌	25n54	0 57	19n 7	2 10	1S52	2 29	16S28	3 47	26S56	4
2	0 5	26 24	1 51	13 51	2 58	7 51	3 19	20 45	4 38	26 58	4
3	1 14	24 55	4 43	7 58	3 44	13 17	4 10	23 57	5 29	25 46	5
4	2 18	21 41	3 30	11 53	4 34	18 1	5 0	26 7	6 18	23 16	6
5	3 16	17 6	4 16	35 6	5 21	21 53	5 51	26 58	7 6	20 3	7
6	4 7	11 40	5 0	9 44	6 9	24 39	6 42	26 36	7 48	16 49	7
7	4 54	5 53	5 46	14 48	7 0	26 21	7 32	25 0	8 30	10 52	8
8	5 39	0 53	6 33	19 12	7 51	26 48	8 20	22 16	9 12	5 22	9
9	6 22	5 45	7 21	22 37	8 42	26 1	9 9	18 35	9 55	0n29	10
10	7 6	11 6	8 10	25 4	9 31	24 3	9 52	14 0	10 41	6 33	11
11	7 48	15 54	9 0	26 23	10 19	20 59	10 37	8 47	11 31	12 27	12
12	8 33	19 59	9 50	26 30	11 6	16 58	11 22	3 5	12 25	17 52	13
13	9 20	23 12	10 41	25 24	11 50	12 11	12 8	2n53	13 24	22 23	14
14	10 10	25 22	11 30	23 7	12 33	6 49	12 53	8 53	14 27	25 33	15
15	11 2	26 26	12 16	19 48	13 17	1 4	13 45	14 29	15 31	27 2	16
16	11 54	26 14	13 2	15 36	14 5	4n49	14 40	19 34	16 33	26 37	17
17	12 44	24 50	13 46	10 41	14 54	10 37	15 40	23 34	17 31	24 25	17
18	13 32	22 20	14 30	5 17	15 45	16 1	16 43	26 9	18 23	20 43	18
19	14 17	18 49	15 14	0n24	16 40	20 40	17 45	27 4	19 11	15 55	19
20	15 4	14 31	15 59	6 11	17 38	24 14	18 45	26 12	19 55	10 18	20
21	15 48	9 33	16 47	11 48	18 38	26 22	19 40	23 39	20 39	4 20	20
22	16 33	4 9	17 39	16 55	19 38	26 53	20 29	19 40	21 25	1n44	21
23	17 20	1n34	18 36	21 24	20 38	25 33	21 19	14 37	22 12	7 57	22
24	18 8	7 20	19 36	24 40	21 34	22 38	22 6	8 52	23 1	13 9	23
25	19 0	12 54	20 38	26 29	22 28	18 15	22 53	2 46	23 51	18 0	☌
26	19 55	18 2	21 40	26 28	23 18	12 51	23 38	3S23	☌	21 59	0
27	20 53	22 18	22 40	24 38	☌	6 52	☌	9 19	0 43	24 54	0
28	21 54	25 16	23 35	21 7	0 8	0 35	0 25	14 42	1 33	26 33	1
29	22 58	26 32	☌	16 14	0 56	5S34	1 12	19 21	2 26	27 4	2
30	☌	25 51	0 28	10 30	1 43	11 20	2 4	23 2	3 36	26 17	3
31	0 0	23 17	1 20	4 20			2 55	25 36			4

D.	☽ S D inDeg	in T.	D.	☽ S.D inDeg	in T.	D.	☽ S.D inDeg	in T.	D.	☽ S.D inDeg	in T.	D.	☽ S.D inDeg	in T.	D.	☽ S in D
	′ ″	s		′ ″	s		′ ″	s		′ ″	s		′ ″	s		′
6	16 4	68	4	15 51	66	2	15 38	65	2	15 12	68	2	14 15	69	2	14
8	15 32	64	6	15 23	65	4	15 11	66	4	14 53	69	4	14 48	67	4	14
10	15 8	64	8	15 0	66	6	14 52	68	6	14 47	69	6	14 59	65	6	15
12	14 54	66	10	14 48	68	8	14 45	69	8	14 53	67	8	15 21	64	8	15
14	14 48	68	12	14 46	69	10	14 50	67	10	15 8	65	10	15 49	66	10	16
16	14 48	68	14	14 51	67	12	15 3	65	12	15 29	64	12	16 11	71	12	16
18	14 53	67	16	15 3	64	14	15 20	64	14	15 50	67	14	16 22	76	14	16
20	15 1	64	18	15 15	63	16	15 35	65	16	16 2	71	16	16 19	77	16	16
22	15 15	63	20	15 29	64	18	15 49	68	18	16 6	75	18	16 16	71	18	15
24	15 35	65	22	15 48	69	20	15 58	73	20	16 7	75	20	15 51	67	20	15
26	16 2	67	24	16 6	74	22	16 8	76	22	16 2	71	22	15 36	65	22	15
28	16 28	76	26	16 24	76	24	16 13	73	31	15 0	69	30	14 48	60	30	14

Royal EPHEMERIS for GREENWICH-OBSERVATORY.

♄		♃		♂		♀		☿	
uth	Decl.	South	Decl.	South	Decl.	South	Decl.	South	Decl.
m	° ′	h m	° ′	h m	° ′	h m	° ′	h m	° ′
J A N U A R Y.									
4 8	9 S 3	1 20	20 S 50	16 51	5 N 16	20 44	15 S 20	0 24	20 S 24
3 56	8 57	1 10	20 41	16 40	5 0	20 42	16 1	☌	19 52
3 44	8 51	1 0	20 32	16 29	4 45	20 41	16 41	23 16	19 54
3 32	8 44	0 50	20 22	16 18	4 35	20 40	17 20	22 51	20 3
3 20	8 38	0 40	20 13	16 7	4 27	20 40	17 58	22 36	20 16
3 8	8 32	0 30	20 4	15 56	4 19	20 40	18 35	22 26	20 44
2 57	8 25	0 20	19 54	15 44	4 14	20 41	19 10	22 19	21 7
2 45	8 18	0 11	19 44	15 32	4 12	20 42	19 38	22 15	21 34
2 34	8 11	0 1	19 34	15 20	4 14	20 43	20 3	22 14	21 52
2 23	8 3	23 48	19 23	15 8	4 17	20 44	20 26	22 15	22 7
F E B R U A R Y.									
2 7	7 S. 52	23 35	19 S. 10	14 52	4 22	20 49	20 S. 50	22 20	22 S. 12
1 56	7 44	23 25	19 0	14 40	4 34	20 51	21 4	22 24	22 3
1 45	7 36	23 16	18 49	14 27	4 47	20 53	21 14	22 29	21 46
1 34	7 28	23 7	18 38	14 15	4 58	20 56	21 14	22 36	21 56
1 24	7 20	22 58	18 28	14 2	5 12	20 59	21 14	22 43	20 20
1 14	7 12	22 49	18 17	13 48	5 30	21 2	21 5	22 50	19 44
1 4	7 3	22 41	18 6	13 34	5 51	21 6	21 54	22 57	18 39
0 54	6 55	23 32	17 55	13 19	6 14	21 9	20 36	23 5	17 23
0 44	6 46	22 23	17 45	13 5	6 38	21 13	20 12	23 15	15 55
0 34	6 37	22 15	17 34	12 50	7 3	21 17	19 43	23 22	14 13
M A R C H.									
0 17	6 S. 31	22 10	17 S. 27	12 39	7 N 20	21 18	19 S. 24	23 28	13 S. 0
0 17	6 23	22 1	17 16	12 24	7 47	21 21	18 49	23 37	10 58
0 7	6 14	21 53	17 4	12 8	8 12	21 25	18 5	23 46	8 44
3 54	6 6	21 44	16 52	11 53	8 35	21 29	17 20	23 56	6 18
3 44	5 57	21 36	16 41	11 37	8 59	21 32	16 31	0 3	4 48
3 34	5 48	21 28	16 30	11 22	9 24	21 36	15 37	0 14	1 0
3 24	5 40	21 20	16 19	11 8	9 46	21 39	14 40	0 24	1 N 47
3 13	5 31	21 12	16 9	10 53	10 4	21 43	13 37	0 34	4 39
3 3	5 23	21 4	15 58	10 29	10 20	21 47	12 32	0 43	7 28
2 52	5 15	20 55	15 48	10 24	10 34	21 51	11 22	0 53	10 5
A P R I L.									
2 44	5 S. 4	20 42	15 S. 34	10 5	10 N 46	21 53	9 S. 47	1 4	13 13
2 35	5 56	20 33	15 24	9 51	10 56	21 55	8 31	1 7	15 9
2 26	4 48	20 24	15 14	9 38	10 59	21 59	7 16	1 10	16 35
2 16	4 40	20 15	15 5	9 25	10 57	22 1	5 59	1 8	17 34
2 6	4 32	20 6	14 56	9 13	10 55	22 4	4 38	1 2	18 4
1 56	4 24	19 57	14 47	9 1	10 52	22 6	3 15	0 53	18 7
1 46	4 17	19 48	14 38	8 50	10 46	22 8	1 52	0 42	17 41
1 36	4 10	19 38	14 30	8 39	10 37	22 10	0 29	0 27	16 51
1 26	4 3	19 29	14 22	8 28	10 27	22 12	0 N 56	0 10	15 40
1 15	3 56	19 19	14 14	8 18	10 12	22 14	2 30	23 46	14 15

N. B. Declinations are for Noon of each Day.

ROYAL EPHEMERIS for GREENWICH OBSERVATORY, 176

	♄		♃		♂		♀		
	South	Decl.	South	Decl.	South	Decl.	South	Decl.	South
D.	h m	° ′	h m	° ′	h m	° ′	h m	° ′	h m
				M A Y.					
1	21 5	3 S. 49	19 9	14 S. 7	8 9	9 N 58	22 16	3 N 44	23 29
4	20 55	3 43	18 59	14 0	7 59	9 40	22 18	5 7	23 13
7	20 45	3 37	18 49	13 53	7 50	9 20	22 19	6 30	22 59
10	20 34	3 31	18 39	13 46	7 40	8 59	22 21	7 51	22 48
13	20 24	3 26	18 28	13 40	7 31	8 36	22 23	9 11	22 39
16	20 13	3 21	18 18	13 35	7 22	8 12	22 25	10 31	22 33
19	20 2	3 16	18 7	13 31	7 13	7 47	22 27	11 49	22 28
22	19 51	3 11	17 56	13 27	7 5	7 19	22 30	13 3	22 25
25	19 39	3 6	17 46	13 24	6 56	6 51	22 32	14 13	22 24
28	19 28	3 2	17 35	13 22	6 48	6 21	22 34	15 40	22 24
D.				J U N E.					
1	19 12	2 S. 57	17 17	13 S. 19	6 37	5 N 40	22 39	16 N 50	22 25
4	19 1	2 53	17 6	13 17	6 29	5 10	22 41	17 50	22 31
7	18 49	2 50	16 53	13 16	6 21	4 38	22 43	18 46	22 38
10	18 37	2 47	16 41	13 14	6 13	4 4	22 46	19 41	22 46
13	18 25	2 45	16 28	13 14	6 5	3 27	22 48	20 27	22 57
16	18 13	2 43	16 16	13 15	5 58	2 50	22 51	21 10	23 11
19	18 1	2 41	16 3	13 16	5 50	2 11	22 54	21 47	23 27
22	17 49	2 40	15 51	13 18	5 43	1 35	22 57	22 19	23 43
25	17 37	2 39	15 38	13 21	5 36	0 56	23 0	22 45	ó
28	17 25	2 38	15 26	13 24	5 29	0 19	23 3	23 7	0 14
D.				J U L Y.					
1	17 12	2 S 37	15 13	13 S 27	5 22	0 S 22	23 7	23 N 20	0 26
4	17 0	2 37	15 0	13 31	5 15	1 2	23 10	23 29	0 41
7	16 48	2 38	14 47	13 36	5 8	1 43	23 14	23 32	0 55
10	16 35	2 38	14 33	13 41	5 2	2 24	23 18	23 28	1 7
13	16 23	2 39	14 20	13 47	4 55	3 6	23 22	23 17	1 16
16	16 10	2 41	14 7	13 53	4 49	5 50	23 26	23 0	1 24
19	15 58	2 43	13 54	13 59	4 43	4 34	23 30	22 37	1 3
22	15 46	2 45	13 41	14 5	4 37	5 17	23 34	22 8	1 36
25	15 34	2 47	13 28	14 12	4 32	6 6	23 38	21 33	1 4
28	15 22	2 50	13 15	14 20	4 26	6 43	23 42	20 54	1 43
D.				A U G U S T.					
1	15 6	2 S 54	12 57	14 S 31	4 20	7 S 39	23 47	19 N 51	1 45
4	14 54	2 57	12 44	14 39	4 15	8 22	23 50	18 59	1 45
7	14 42	3 1	12 32	14 47	4 10	9 5	23 54	18 4	1 43
10	14 30	3 5	12 20	14 55	4 6	9 48	23 58	17 1	1 38
13	14 18	3 9	12 6	15 3	4 2	10 33	ó	15 54	1 3
16	14 7	3 14	11 53	15 11	3 58	11 17	0 3	14 44	1 26
19	13 55	3 19	11 40	15 19	3 54	12 1	0 7	13 28	1 17
22	13 43	3 23	11 28	15 27	3 50	12 44	0 10	12 13	1 2
25	13 31	3 28	11 16	15 35	3 46	13 25	0 13	10 52	0 47
28	13 19	3 33	11 4	15 42	3 43	14 6	0 16	9 29	0 27

ROYAL EPHEMERIS for GREENWICH-OBSERVATORY, 1761.

♄		♃		♂		♀		☿	
South	Decl.	South	Decl.	South	Decl.	South	Decl.	South	Decl.
h m	° ′	h m	° ′	h m	° ′	h m	° ′	h m	° ′
SEPTEMBER.									
3 4	3 S 40	10 46	15 S 50	3 38	14 59	0 20	7 N 36	☌	4 5
2 52	3 45	10 34	15 57	3 35	15 38	0 23	5 8	23 32	5 44
2 41	3 51	10 22	16 3	3 32	16 17	0 26	4 40	23 16	7 23
2 29	3 57	10 10	16 9	3 29	16 56	0 29	3 9	23 4	8 42
2 17	4 3	9 59	16 14	3 26	17 33	0 31	1 36	22 57	9 29
2 6	4 9	9 47	16 19	3 24	18 11	0 34	0 6	22 56	9 38
1 54	4 15	9 35	16 28	3 21	18 45	0 37	1 S 27	22 58	9 7
1 43	4 21	9 24	16 24	3 19	19 20	0 40	3 0	23 3	8 2
1 32	4 27	9 13	16 31	3 16	19 52	0 43	4 30	23 9	6 29
1 20	4 32	9 1	16 34	3 14	20 24	0 46	6 1	23 17	4 35
OCTOBER.									
1 8	4 S 37	8 40	16 S 37	3 12	20 S 55	0 49	7 S 34	23 26	2 N 30
57	4 42	8 38	16 38	3 10	21 23	0 52	9 1	23 34	0 20
45	4 47	8 27	16 39	3 9	21 50	0 55	10 29	23 43	2 S 0
33	4 51	8 15	16 40	3 7	22 15	0 58	11 52	23 51	4 17
21	4 56	8 4	16 40	3 6	22 38	1 1	13 14	23 59	6 30
9	5 0	7 53	16 39	3 4	23 0	1 4	14 33	0 3	8 44
57	5 4	7 42	16 38	3 2	23 21	1 8	15 48	0 11	10 50
45	5 8	7 31	16 36	3 0	23 39	1 11	17 0	0 18	12 48
33	5 12	7 20	16 33	2 58	23 54	1 15	18 8	0 24	14 43
21	5 16	7 9	16 30	2 56	24 8	1 18	18 13	0 29	16 30
NOVEMBER.									
4	5 S 19	6 55	16 S 26	2 54	24 S 22	1 22	20 S 32	0 43	18 S 4✓
52	5 21	6 44	16 22	2 52	24 30	1 25	21 25	0 49	20 7
40	5 22	6 33	16 17	2 50	24 35	1 29	22 12	0 54	21 31
28	5 23	6 22	16 11	2 47	24 39	1 33	22 54	1 0	22 41
16	5 24	6 11	16 5	2 45	24 40	1 36	23 28	1 6	23 42
4	5 25	6 0	15 59	2 43	24 38	1 40	23 58	1 12	24 30
51	5 25	5 59	15 52	2 41	24 35	1 43	24 21	1 18	25 9
39	5 25	5 38	15 45	2 39	24 28	1 47	24 38	1 23	25 34
26	5 24	5 27	15 37	2 36	24 20	1 51	24 48	1 28	25 48
13	5 23	5 16	15 29	2 33	24 14	1 54	24 50	1 31	25 47
DECEMBER.									
0	5 S 22	5 3	15 21	2 30	23 S 56	1 58	24 S 46	1 31	25 S 35
47	5 20	4 52	15 12	2 27	23 40	2 1	24 54	1 27	25 9
34	5 18	4 41	15 2	2 24	23 20	2 4	24 17	1 21	24 33
21	5 15	4 29	14 42	2 21	22 59	2 7	23 52	1 9	23 54
8	5 12	4 18	14 52	2 18	22 35	2 10	23 22	0 47	22 56
55	5 9	4 6	14 31	2 14	22 10	2 13	22 45	0 19	21 58
42	5 5	3 55	14 21	2 11	21 42	2 15	22 1	23 39	21 0
29	5 1	3 43	14 10	2 7	21 11	2 18	21 13	23 12	20 22
16	5 47	3 32	13 58	2 4	20 40	2 20	20 18	22 52	20 2
3	4 50	3 21	13 45	2 0	20 5	2 22	19 19	22 35	20 1

not Room for the cœleſtial *Phænomena*, as in *Pall.* 1759, P. 36.
ſe appearing in the *Imp. Magazine*, we ſhall not notice, except for their

A TABLE of the mean Specific GRAVITIES of ſeveral remarkable So FLUID BODIES.

SOLIDS.

Fine Gold	19,640	Iſland Cryſtal	2,720	Borax	1,717	Ice
Stand. Gold	18,888	Marble	2,707	Allum	1,714	Aſh *(dry)*
Lead	11,340	Pebble-ſtone	2,700	Clay	1,712	Plumb - tre
Fine Silver	11,092	Coral	2,700	Dry Bone	1,660	*(dry)*
Stand.Silver	10,536	Jaſper	2,666	Hum. *Calculus*	1,542	Oak *(dry)*
Copper	9,000	Rock Cryſtal	2,650	Sand	1,520	Yew
Cop.halfpence	8,915	Pearl	2,630	Gum Arabic	1,400	Crab-tree
Fine Braſs	8,350	Glaſs	2,600	Opium	1,350	Beech *(dry*
Caſt Braſs	8,100	Flint	2,570	*Lignum Vitæ*	1,327	Walnut-tre
Steel	7,850	Onyx-Stone	2,510	Coal	1,250	*(dry)*
Iron	7,644	Com. Stone	2,500	Jet	1,238	Cedar
Pewter	7,471	Glauber Salt	2,250	Coral	1,210	Fir
Tin	7,320	Cryſtal	2,210	Ebony	1,177	Cork
Caſt-Iron	7,000	Oyſter-ſhells	2,090	Pitch	1,150	*Experiments*
Lead Oar	6,200	Brick	2,000	Roſin	1,100	*made to ſ*
Copper Oar	5,167	Earth	1,984	Mahogany	1,063	*Specific Gr*
Lapis Calami-		Nitre	1,900	Amber	1,040	Sap - W
naris	5,000	Vitriol	1,880	*Brazil* Wood	1,031	*Meaſuring*
Load-ſtone	4,930	Alabaſter	1,874	Box-Wood	1,030	*Weight,*
Crude Anti-		Horn	1,840	Com. Water	1,000	*for differ*
mony	4,000	Ivory	1,820	Bees Wax	0,955	tures.
Diamond	3,517	Brimſtone	1,800	Butter	0,940	
White Lead	3,160	Chalk	1,793	Logwood	0,913	

FLUIDS.

Quickſilver	14,000	Spirit of Urine	1,120	Ale	1,028	Oil of Olive
Oil of Vitriol	1,700	Human Blood	1,054	Vinegar	1,026	Spirit of Tur-
Oil of Tartar	1,550	Sack	1,033	Tar	1,015	pentine
Honey	1,450	Urine	1,032	Water	1,000	Spirit of Wi
Spirit of Nitre	1,315	Milk	1,031	Diſtil'd waters	0,993	Oil of Tur-
Aqua-Fortis	1,300	Sea-Water	1,030	Red Wine	0,990	pentine
Treacle	1,290	Serum of hu-		Linſeed Oil	0,932	Common Ai
Aqua Regia	1,234	man Blood	1,030	Brandy	0,927	

☞ The ſame Sort of Bodies having different *Goodneſs*, *Fineneſs*, *Firm* *ture*, *Dryneſs*, and being more or leſs pure or free from Mixture, wheth or *Fluids*, have ſome Difference in Specific Gravity. And Heat and Col ing Bodies, will alter their Specific Gravities. *Green* Wood is much hea *dry* Wood; and ſome green Wood (as *Elm)* as alſo ſome dry Wood (as *Vitæ)* will ſink in Water.

To find the Specific Gravity of Bodies?

Caſe 1. *A ſolid Body heavier than Water.*

Weigh it in Air, then in Water, or ſome other Fluid, whoſe Specific Gravity is known.

put the w^t^ in *Air* = A

W^t^ in *Water* = W

The Specific Gravity of Water = S

Specific Gravity of Body = 1

$$\text{Then, } B = \frac{A}{A - W} S,$$

the Specific Gravity of the Body requir'd.

Caſe 2. *A ſolid Body lighter than Water.*

Take a Piece of Metal, and tie it to a Piece of the light Body, to make the

Water. Then putting A, S, B, as in Caſe 1.

And M = Weight of the Metal in Water.

C = Weight of the *Compound* in Water.

$$\text{Then } B = \frac{A\,S}{A + M - C}$$

the Specific Gravity of the Body requir'd.

Caſe 3. *A Fluid*

Take a ſo
of known
Gravity th
ſink in th
whoſe Speci
vity is requ

Put the ſi
ters as in

then S =

Otherwiſ
a Body that

given Fluid,
lſo in Water.
Weight of the
in Air = A
in Water = W
f the Fluid = F
cific Gravity of
= S
Specific Gravity
of the Body = G

Then $G = \frac{A - F}{A - W} S.$

☞ for *Mercury*, *powders*, *Duſt*, or ſmall *Pieces* of Bodies, you muſt uſe a Glaſs or metal *Bucket*, and ballance its Weight both in Air and Water. And weigh Bodies, that will diſſolve in Water, in Oil of *Turpentine*.

The ſolid Body weighed in a Fluid muſt be ſuſpended by a Horſe-hair, or fine ſilk Thread. And the nearer the Body and Fluid are of the ſame Specific Gravity, the more *exact* will be your Determination.

Propoſition 1. *TO find what Sort an offered Piece of* Metal *or* Matter *is of?*
You find its Specific Gravity by the foregoing Rule, which being ſought
the Table, the neareſt to it gives the Name, and kind of the Body.

poſition 2. *TO find the Solid Content of a ſmall Body heavier than Water?*
Weigh it in Air and Water, and the Diff. of Weights reduced to Grains
divided by 256, the Quotient will ſhew the Cubic Inches it contains.
a cubic Inch of Water weighs 256 *Grains*, or a cubic Foot 76lb. Troy, or
rdupoiſe, which is but 254 Grains to an Inch.

ition 3. *TO find the Weight of a Body from its given Solidity, and the contrary?*
Put n = 0,5275 Ounces Troy, or 0,5787 Ounces Avoirdupoiſe; S = Spe-
avity of the Body, in the foregoing Table; then, as 1 : n S : : Solidity in
: Weight in Ounces. And as n S : 1 :: Weight in Ozs : Solidity in Inches.
The Weight of a Cubic Inch of Water is ,5275 oz. Troy, or ,5787 oz. Avoirdupoiſe. *See Mr.* Emerſon's *Principles of Mechanics*.

PORTIONS of the
RENGTH of Sorts of
d and other Bodies, from
iments.

ew, Plumb-tree, Oak	11
ſh	$8\frac{1}{2}$
, Thorn	$7\frac{1}{2}$
, Holly, Elder, Plane, -tree, Apple-tree	7
Cherry-tree, Hazle	$6\frac{2}{3}$
Aſp, Birch, White Fir, w, or Saugh	6
	107
	50
	22
	$6\frac{1}{2}$
e-ſtone	1

REMARKS on the different STRENGTH of BODIES.

THE *Goodneſs* or *Badneſs* of the ſame Sort of Wood makes a further Difference in the Strength.

A Cylindric Rod of ſound clean Fir, of an Inch round, drawn in Length, will bear at Extremity 400 lb. And a Spear of Fir of 2 Inches Diameter will bear about 7 Tun.

A Rod of good Iron of an Inch round will bear near 3 Ton Weight. And a good Hempen Rope of an Inch round, will bear 1000 lb. at Extremity.—But none of theſe Bodies ſhould be uſed to bear above a third or fourth Part of their utmoſt Weight or Strength for a Length of Time.

Hence, if a Spear of Fir, or a Rope, or a Spear of Iron, of d Inches Diameter, were to lift $\frac{1}{4}$ the extreme Weight, then

The Fir would bear $8\frac{4}{5}$ d d *Hundred Weight.*
The Rope 22 d d *Hundred Weight.*
The Iron $6\frac{1}{4}$ d d *Tuns Weight.*

OF the *different* BULK of BODIES.

Nature of Things the *Size* of all *Vegetables*, *Animals*, and artificial *Ma-*
limited; as beyond which Size they would fail of their End; or being
gmented, would fall down or in Pieces by their own Weight.
a ſimilar Beam of Timber, extended beyond a certain Magnitude, cannot
its own Weight, but would break. Nor can a *Giant* be produced of pro-
Stature of any known Matter; becauſe, being burthened with his own
he could not ſtand, for want of *Bone* and Ligaments ſufficiently ſtrong to
Weight, and hold him together. The Branches of a prodigious ſized Tree
ll off, and the Trunk itſelf break down by its own Weight: the *Streſs*
being greater than its *Strength* of the Texture to ſupport it. Vaſt

Vaſt *Buildings, Columns,* and *Pyramids* of Matter would fall to Pieces by t
Wt. And hence appears the Abſurdity of attempting to build a Ship or Houſ
a certain Magnitude ; alſo the vain Attempts of building the Tower of *B*

Animals are ſuited in the Fitneſs of their Size to the Ends they were con
deſigned for. A ſmall Animal is found to be ſtronger and more active in
tion to its Bulk than a large one. And ſmall Animals we find can carr
more in Proportion to their Weight than large ones. Some ſmall Ani
Fleas) we find can jump above 100 Times their Length ; while other ſm
mals run vaſtly ſwifter, and, in Proportion to their Bulk and Length, a
more active than large ones.

Supernumerary QUESTIONS, and a QUERE, propoſed by Mr. *C. Maſon*, of

XX. QUESTION, 202. — *Hiſtory* tells us, at the Caſtle of *Corigſtein*,
City of *Dreſden*, in *Germany*, is a Caſk which contains 1616 *Wine* H
the Area of its Bung-Diameter $330,\frac{74}{77}$ Wine Gallons ; its Length and
are *equal* : And ſuppoſing the Form of the *Caſk* to be the *Middle Fruſtum* o
roid, *what is the Length and Head Diameter thereof?*

XXI. QUESTION, 203 — *Suppoſe* a Ship ſets Sail from a Place in the
of 50° 45′ N. and continues her Courſe, *invariably*, W. by N. without
tion ; where will ſhe at laſt arrive ; and in what Time will ſhe complete her
at a mean Rate of running 6 Knots in an Hour ?

XV. QUERE, 130 — WHAT Appearance will the Earth make to a
the Center of the *Faces* of the *Moon?*

XVI. QUERE 131 — *By* Moderator.

WHETHER Mr. *C. Brent* (who in the *Imp. Magazine* for *Sept.* 1760,
the proper Uſe of the Terms *natural* and *artificial*, as applied by Cuſtom
of the Year, and Day of the Sun's Light) would *more* properly term a M
Day, who was born *in*, but begot *out of*, Marriage, by calling him the
artificial (viz. or *legitimate)* Son of his *Father* ; or otherwiſe, by *Nec*
equivocal Son of his *Mother*.

REMARK, *By Mr.* CHRISTOPHER MASON, *dated* Scots-Float, Sep. 21

WHOEVER denies the Exiſtence of the Rays and Subſtance of Light,
Darkneſs, and is therefore unfit for a *Pilot* to *others* — Such a *Perſon* mig
deny his *own Exiſtence*, and pretend *to prove* himſelf a *Non-Entity*.

☞ *The* Aberration *of Light is ſufficient to prove it to be a Subſtance.*
cal Idea *is an* Ignis Fatuus, *denoting a ſuperficial Judgment or diſtempered B*
that does not underſtand Newton *and* Nature *ſhould endeavour to learn their T*

N. B. The ſame *ingenious Correſpondent*, who has done Honour to Truth
ence, for many *ſucceeding Years*, in the *original Ladies Diary*, and our
anſwered the 11th and 12th *Queries*, in a poetical Deſcription of *Wit* a
which we have not Room for, concludes thus on Truth :

This ſacred Goddeſs, which all Men ſhould prize,
Is often maſk'd — hid under thin Diſguiſe.

ARGUS BRIAREUS *to the* Palladium-Author. *Remarks* on the *Imp. M*

F. B's abſurd Syſtem of the World (the Quinteſſence of *Methodiſm* and F
publiſhed for genuine Truth and Science, in *Latin*, for the Uſe of all N
the *Imp. Magazine* for *Sept.* 1760, and addreſſed to *fictitious* wiſe and lea
thors, as himſelf, ſavours much of the *Chatham* Philoſopher's *new* Doctrin
and *Darkneſs* ; refined from the Lees of *Chatham-Uſury*, and from the Dreg
ham-Butt. — *F. B.* after many Praiſes and Compliments laviſhed on *monthly* Pr
and fictitious wiſe Authors thereof (for which ſome would deſerve the *Houſe*
tion) concludes in wiſhing thoſe *(his beloved Brethren)* may receive Grace a
from *God*, and Honour from Men. The true Syſtem (from which he ex
nal Honour) being not his own, *he ſays* ; for the World was made by Go
Gift is from the LORD. *See the* Impoſture *of this Syſtem explained at the*
Preface to our Royal Aſtronomer.

EMEN

EMENDATIONS of *Palladium*, 1760.

L.	For	Read
22	in 7th Year	is 7 Years.
19	∠	△
9	$21^d\ 8^h\ 48^m\ 17^s$	$21^d\ 9^h\ 48^m\ 17^s$
8b	*dele*, and the Equation of a Curve	
2	39·5	37·5
	68..995	68.1975
4b	45669.92	45660.21 Maximum
19	$a+2e$	$x+2e$
21	$a=e$	$x=e$
9b	$2xx$	$2zz$
8b	$\times\ \overline{x-y}^2$	$+\ \overline{x-y}^2$
	$x+y-x$	$v+y-x$
8b	$\frac{y-z}{\overline{y+z}^2}$	$\frac{y-x}{\overline{y-x}^2}$
3b	$\sqrt{\frac{c}{2}\pm\sqrt{4-\frac{b-a}{4}}}$	$\sqrt{\frac{c}{2}\pm\sqrt{\frac{c^2}{4}-\frac{\overline{b-x^2}}{4}}}$
16	divided	multiplied
3b	$\frac{4pc^2}{3nn}$	$\frac{4p}{3}$
6	Work	Worth
23	Queſ. 160	Queſ. 159
9b	151.64	15.6448
2b	344.25	434.25
ult	more or leſs	leſs or more

Correction of Mr *Brent*'s *Errors*, (ſee his *comp. Aſtron.*) by *Argus*.

P. 341, for 585 bef. Chr. current. *May* 28, for *Mon*. cyc. ⊙ 12 d. let. G r. *Wedn*. . . 13 . . FE

P. 346. for 4ys, be. Chr. current, *March* 12. *Sund*. Lp Yr D. Let. BA r. *Mon*, com. Yr. . . G

P. 341, falſe Rule given by Mr. *B*. to find ⊙'s Cyc. for Yrs. *b*. Ch.

Imp. Mag. Sep, 1760 p. 472. for 4712 Jul. Pe. *May* 28, Mond. read 587 bef. Chr. Sund.

*** *All according to reckoning back fr. the preſent Date, Week-day, and Mth-day admitted; which Mr*. Brent's new Suppoſits. *cannot clear of* his *Error*.—the *date* of Chr. Birth being (according to our preſ. Account, fr. whence we reckon back) 4714 Jul. Per. Theref. 585 or 586 cur. (*ſee Lon. Mag. Apr.* 1760) *May* 28. *Mond*. D. Let. G was no ⊙. But 585 cur. *May* 28. *Wed*. D Let. FE ⊙ ecl. according to *Newton*; *Halley*'s Aſt. Tables, P. *b* 3. See *Ideal* and *verbal* Errors, elſewhere. *Argus*.

---

rfieldienſis ſent us his Remarks on the Solution to XII. Queſtion, p. 63, put *x* for Height of Water's Surface fr. Bottom of Glaſs, after Immerſion of all's Segment — Then 6 Inches the Glaſs's Height : 5 Inches the Diameter : $\frac{5x}{6}$ Inches Diameter to $\frac{1}{2}$ Glaſs's Content. Now *x* (he ſays) was not put by for Height of the Water's *Surface* from Bot. Glaſs, after Immer. of Ball; who 2, 8 the *Segment*'s Height, after uſing much Attention and difficult *Theorems*, en this Gentleman reſolves the Queſt. without *Algebra*.

	Inches
nt wh. Glaſs	39,27
nt of Globe's *Segment*'s he Glaſs	26,27
	———
in Glaſs	13, Rem.
nt wh. Globe	33,5104
's *Segment* out of Glaſs	26,2721
	———
ence	7,2383
nt (allowing for Water's boſity at Glaſs's Top)	28,152
ty not allow'd	26,272

	Inches
Mr. *Rowe*'s Content	45,75
	19,635
	———
Content of Globe in Glaſs	26,115
Mr. *Brown*'s Content	50,646
	19,635
	———
Content of Globe in Water overflowing	31,011

Cheſterfieldienſis ſays Mr. *Rowe*'s Solution to 14 Queſtion ſeems to be not true;

that neglecting his aſſuming an ∠ of 18° (not given in Queſt.) he thinks h *nimum* ſhould be $\frac{1}{x^2} + \frac{1}{a^2 + x^2 - 2cax} + \frac{1}{f^2 + x^2 - 2bmx}$. See L Queſ. 330—To inſert all this Gentleman's *Remarks* would require too much

☞ The ☽ *generally*, inſtead of *always*, turns the ſame Face towards us, *phyſical* Cauſes of her Variation and Manner of Recovery are deſcribed by S *Newton*, in his *Principia*, M. *De la Caille*, and other *Aſtronomers*, in their W without requiring Mr. C. *Brent*'s Aid to inform us.

⁂ *After a happy and glorious Reign, in which ſeveral* important Acqu *have been added to the* BRITISH CROWN, *his late* ſacred MAJESTY KING G II. *died ſuddenly at his* Palace, *at* Kenſington, *on* Saturday, October 25, *and his* illuſtrious Succeſſor, *and* IMPERIAL MAJESTY KING GEORGE *cended the Throne by* hereditary Right; *being proclaimed on* October 26, *at* L *to the unſpeakable* Joy *of this Nation, mixed with a* loyal Concern *for the* L royal Predeceſſor.

I. *Juſt Publiſhed*

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The *Whole* interſperſed with a Variety of *neceſſary Tables* and *Articles*, ſub to the *three* principal *Subjects.*

BY ROBERT HEATH, a *Military Officer.*

Now Heaven in all her Glory ſhone, and roll'd
Her Motions, as the Great Firſt Mover's Hand [B. VIII.
Firſt wheel'd their Courſe. ————————— Milton's Para

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——————— *Firſt the* Sun
(A mighty Sphere) he framed; unlightſome firſt,
Tho' of ætherial Mold: Then form'd the Moon
Globoſe; and every Magnitude of Stars;
And ſow'd with Stars *the Heaven thick as a Field.*

[B. viii. l. 354.
Milt. Par. loſt,

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tioner's Hall, who are the Proprietors and Publiſhers of this Palladium.

⁎ *As* CÆSAR *did — ſo now a* GEORGE * *ſhall reign*;
And, Britons *Rights*, *a* BRITON †-KING *maintain!*

† See his *Majeſty*'s moſt *gracious*, moſt *admired*, and *affecting Speech*, from th

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